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Herbicides for Forest Weed Control in the Inland Northwest:

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A Summary of Effects on Weeds and Conifers

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PESTICIDE PRECAUTIONARY STATEMENT

This publication reports research involving pesticides. It does not contain recommendations for their use, nor does it imply that the uses discussed here have been registered. All uses of pesticides must be registered by appropriate State and/or Federal agencies before they can be recommended.

CAUTION: Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or other wildlife—if they are not handled or applied properly. Use all pesticides selectively and carefully. Follow recommended practices for the disposal of surplus pesticides and pesticide containers.



RESEARCH SUMMARY

The damaging effects of herbicide treatments on a wide variety of competing species and crop conifers are cataloged for easy reference by silviculturists seeking the best herbicide prescription for plant communities common to the Inland Northwest. For each species the results of herbicide application are given, along with the source of information. Each item includes species, herbicide, application rate, carrier, adjuvants, total mix application rate, application season, plant injury (for up to 4 years), and a reference to the source of the information. Special notes on the use of selected herbicides are also provided.

Available data include the effects of 16 basic herbicides on 34 species, genera, or plant forms, and on 10 conifer species.

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Herbicides for Forest Weed Control in the Inland Northwest: A Summary of Effects on Weeds and Conifers

Raymond J. Boyd
Daniel L. Miller
Frank A. Kidd
Catherine P. Ritter

INTRODUCTION

Successful silvicultural weed control (the suppression of vegetation that competes with or otherwise interferes with the survival and growth of "crop" trees) with herbicides depends on applying an appropriate chemical to susceptible vegetation in a formulation that maximizes the ratio of plant kill to economics of spray application. Planning of effective herbicide spray programs in the Inland Northwest is hindered by the complexity of a large variety of "weed" species, variable efficacy of numerous herbicides, and highly variable environmental conditions. This report is an up-to-date compilation of results from previous herbicide applications in this region. Included are chemical formulations, rate of active ingredient, carrier, adjuvants, total mix rate, timing of application, weed control, and conifer injury resulting from sprays. All reports of treatments are included regardless of effectiveness in weed control. This data base was designed to assist in spray project planning. Data are stratified by weed and conifer species, chemical, season of application, and active ingredient rate.

This publication is the third in a series first published by Potlatch Corporation as "Shrub Control in the Inland Northwest - A Summary of Herbicide Test Results," RN-83-4, in February of 1983 and revised in December 1983. In this version, information from the Intermountain Research Station has been merged with data summarized in the original Potlatch reports. Results include data from the Research Station's own research as well as information obtained from Inland Northwest land managers with experience in the use of herbicides. The title of the publication has been modified to reflect the large amount of additional information on herbicide control of herbaceous forest weeds. In addition, some salient features of the most useful herbicides are emphasized. A general reference figure (fig. 1) has been added to facilitate a preliminary search for herbicides and their relative effects on important forest weed species and conifers in the Inland Northwest. We have added a table (table 1) of herbicides registered for forest weed control in the Inland Northwest (Washington, Oregon, Idaho, and Montana), including chemical, product, formulation, active ingredient per unit of product, manufacturer, cost, and labeled use.

Writing efficient weed control prescriptions requires that information be compiled in a form where various treatments can be easily compared. Miller and Kidd (21) have

described one process for screening treatments to select the optimum chemical brush control prescription. This report should aid silviculturists in preparing prescriptions for chemical site preparation and conifer release treatments.

DESCRIPTION OF DATA FORMAT

Vegetation control summaries for Inland Northwest situations have been written by numerous authors, have appeared in scattered publications, and have used a variety of formats to describe treatment effectiveness. This report is a compilation of data from these publications and from unpublished sources. The majority of the data come from the Northern Rocky Mountains, but several reports are from west of the Cascade Mountains. The herbicides listed generally are registered for forestry use in Idaho, Oregon, Washington, and Montana. However, because many of the results reported are from experimental applications, they may or may not be in accordance with label information or State restrictions. Before using any herbicide, check for label compliance and current State Department of Agriculture registration.

To overcome the fragmented nature of existing herbicide information, we have indexed data in this report by variables crucial to the success of a spray operation. Each item in the data format will be discussed.

Test Results by Species and Herbicide

Herbicide information is arranged alphabetically by shrub species, followed by herbaceous species or species groups, and finally by conifer species. Within species, data are grouped by herbicide treatment. Tank mixes (combinations of herbicides) are indicated by including the respective herbicides within parentheses (), and results must be considered in response to the combination of chemicals, not to any one alone. Herbicide trade names are listed as reported in supporting references. A check with the cited publication or with the office supplying the unpublished data should provide information not included in the tables. While some inferences can be drawn for weed control of similar species in other areas, we do not advocate these data for control recommendations outside the Inland Northwest.

There are no data in this report on the response of crop conifers other than injury by herbicide treatment.

Information on posttreatment tree survival and growth is not as readily available as the data presented on plant injury. The user is cautioned that weed control may not always equate with better crop performance in a complex forest ecosystem. Various side effects of an herbicide treatment can result in counterproductive changes in plant and animal communities. Treatment-induced changes in animal, insect, and disease populations should also be considered. Changes in the availability of the basic growth factors—water, nutrients, light, and heat—may be both beneficial and detrimental.

Application Rate and Mix

Most treatment rates are described in pounds active ingredient per acre. Some ground sprays are listed as LBHG for pounds active ingredient per hundred gallons of spray mix per acre. These are usually applied as high-volume ground sprays. Several herbicides and mixtures are listed by volume. For instance, Tordon 101 is a mixture of picloram and 2,4-D, and the rate is listed as gallons of product per acre.

The total spray volume per acre is listed for aerial applications. Some data are from ground (backpack) applications. Ground sprays are coded differently in the "Gal/Acre" column. The codes are as follows:

G—Ground broadcast spray. Total gallons per acre may also be specified (such as G20 for 20 gallons per acre).

GDP—Hand-sprayed to the drip point. The drip point occurs when spray is applied to individual plants until it first begins to run off foliage surfaces.

S—Spot treatment where spray application is restricted to a localized area (such as a 4- by 4-ft square). Total gallons per acre may also be specified.

D—Shrub and soil drench around individual plants as was often done in ground-applied *Ribes* control sprays.

Ground application generally produces better control than aerial spraying because of more complete coverage. Therefore, if ground results are used per-acre rates should be increased for aerial application.

Treatment Season

Timing of herbicide application is dependent upon several interrelated factors such as brush phenology, localized environmental conditions, and mode of action of specific herbicides. While the tables include a spray season related to dates, these are only approximately related to the phenology of treated plants. For example, most forbs and grasses will cure earlier on dry sites than on more mesic sites. A useful discussion of these considerations was provided by Gratkowski (9). His terminology of seasons of application is used:

Dormant or budbreak—Late winter or early spring at beginning of spring flush of growth. Buds on conifers swelling or bursting; buds on shrubs bursting or new leaves unfolding.

Early foliar—Period of active growth; approximately three-fourths of new leaves on shrubs full size. Period of maximum susceptibility to herbicides.

Late foliar—During midsummer, usually mid-July to early August, after cessation of growth on conifers and shrubs. All leaves full size and hardened. New terminal buds well developed on conifers.

Late summer—Usually late August to early September, long after cessation of spring flush of growth.

Fall—Late September to November, after leaf fall; conifers usually dormant.

Weed Control Data

Weed control is reported as percentage top kill and percentage plant kill in the first, second, or third year. First-year control data were collected during the same growing season as herbicide application. Second-year data were collected during the growing season following spraying, and so forth. Percentage top kill refers to percentage crown volume reduction or percentage crown cover reduction. In either case, the top-kill data are a reasonable estimate of competition reduction. Where references reported control data on other than a percentage basis, percentage control estimates were calculated from original data to present a uniform control scale. Some references reported top-kill data for more than 1 year. Comparing these figures gives an estimate of rapidity of shrub recovery. Percentage plant kill (percentage of examined shrubs that were completely killed) is reported where available.

Careful comparison of study results will reveal many inconsistencies and even contradictions in the results. Tests were installed in different years, at different phenological stages, on different sites, and under different weather conditions. These and other factors produced variation in results. More research and greater experience with the materials should reduce this variation and produce more predictable results. A complete reading of the original reference or contact with the reporter may explain the variation.

Tree Injury

Conifer injury caused by spraying is reported where available. The following codes describe injury:

- 0 - No effect.
- 1 - 0 to 10 percent defoliation, no bud injury.
- 2 - 0 to 10 percent defoliation, slight tip curl, no bud injury.
- 3 - 11 to 40 percent defoliation, slight bud kill.
- 4 - 40+ percent defoliation, moderate bud kill.
- 5 - Slight to moderate top kill, 50+ percent defoliation.

- 6 - Trees killed.

P - Follows numerical injury code when trees were protected from chemical spray.

Defoliation refers to foliage present when sprayed. Bud injury includes both laterals and terminals produced during the spray season.

A note of caution is appropriate concerning tree damage ratings. Conifers suppressed by an overtopping canopy of competing vegetation are screened from a full herbicide application. Many of the reported damage ratings to conifers may be confounded by this complication.

TREATMENT SELECTION

All treatment recommendations must be based on some form of site-specific data on the weed species present, their competitive ranking, and the crop to be benefited. The data presented here permit selection of the most effective candidate treatments by weed and crop species. Figure 1 provides the first "rough cut" on candidate treatments for a given competitor or group of competitors and an estimate of crop tree injury that might be expected. It is presented as a quick preliminary survey, but no prescriptions should be made solely on the basis of this table.

The species-by-species summary tables of herbicide treatment effects, beginning on page 7, will provide important specifics on rates of application, carriers, adjuvants, timing, tree injury, and the source of data.

While costs of treatments are extremely variable, some comparative herbicide cost data are presented in table 1. Other than this, it is beyond the scope of this paper to estimate total treatment expenses. Users are encouraged to consult the chemical distributors, technical representatives, or the original data source for details.

Finally, prior to deciding on the treatment, the label should be thoroughly scrutinized for compliance with legal restrictions and State registration verified with State agricultural authorities.

		SHRUBS																				HERBS					CONIFERS																
HERBICIDE TREATMENTS		MEFE	ALSI	POTR	RUPA	SAMB	SORB	ACGL	RUBU	PAMY	LOUT	VACC	RIBES	PRUN	AMAL	SALX	ROSA	CESA	CEVE	HODI	PHMA	SYMP	SPBE	XETE	PTAQ	CARX	CARU	GRASS	CIRS	FORBS	PIMO	LAOC	PSME	ABGR	TSHE	THPL	PICO	PIEN	PIPO	ABLA			
1	2,4-D (MAY-JULY)	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
2	2,4-D (AUG.-OCT.)	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●	○	●	●	●	○	●	○	●	○	●	●	
3	ASULOX	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
4	ATRAZINE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
5	ATRAZINE + DALAPON	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
6	DALAPON	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
7	DICAMBA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
8	ROUNDUP (MAY-JULY)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
9	ROUNDUP (AUG.-OCT.)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
10	ROUNDUP+GARLON 4	●	●	●	●	●	●	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
11	VELPAR (MAY-JULY)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
12	VELPAR (AUG.-OCT.)	●	●	●	●	●	●	●	○	○	●	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
13	TORDON 101	●	●	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
14	TORDON 101 + 2,4-D	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
15	GARLON 4 (MAY-JULY)	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
16	GARLON 4 (AUG.-OCT.)	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
17	GARLON 4+TORDON 101	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
18	GARLON 4+2,4-D	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

KEY :

- VERY SEVERE INJURY OR KILL
- ▒ SERIOUS INJURY
- MODERATE INJURY
- LITTLE OR NO INJURY
- NO LOCAL DATA— BUT NOT KNOWN TO INJURE
- INADEQUATE INFORMATION

- The ratings for weeds represent the most severe effects derived from trial compilations.

- Conifer ratings represent the average damage ratings derived from test compilations (see text page 14 concerning conifer ratings).

- All plants rated without reference to rate, adjuvants, or application method.

- Since the effectiveness of many herbicides depend upon the stage of plant development (phenology), calendar dates in this table are only approximate.

- Species & genera codes identified in appendix species list.

Figure 1.—Susceptibility of inland Northwest forest species to herbicides—1984.

Table 1.—Herbicides registered for forestry use in Idaho

Herbicide	Product	Formulation	Active ingredient (lb/gal or %)	Manufacturer	Cost ¹	Labeled for:		
						Site prep	Conifer release	Stem injection
2,4-D	Esteron 99 Concentrate	Ester*	3.8	Dow	\$10.50/gal	X	X	
2,4-D	Esteron 6E	Ester*	5.6	Dow	10.50/gal	X	X	
2,4-D	Weedone LV4	Ester*	3.8	Union Carbide	10.50/gal	X	X	
2,4-D	2,4-D LV Ester 4L	Ester*	3.9	Rhone-Poulenc	10.50/gal	X	X	
2,4-D	2,4-D Ester 6L	Ester*	5.7	Rhone-Poulenc	10.50/gal	X	X	
2,4-D	2,4-D LV Ester 4EC	Ester*	4	USS Agri-Chemicals	10.50/gal	X	X	
2,4-D	Brush-Rhap LV 4-D	Ester*	3.8	Vertac	10.50/gal	X	X	
2,4-DP + 2,4-D	Weedone 170	Ester*	2	Union Carbide	19.62/gal	X		
2,4-DP + 2,4-D +		Ester*	2					
2,4-D +		Ester*	2					
Dicamba	Brush Killer 800		0.5	PBI Gordon		X		
2,4-D	DMA 4	Amine	3.8	Dow	8.00/gal			X ²
2,4-D	Formula 40	Amine	3.8	Dow	8.00/gal			X ²
2,4-D	Weedkiller 40A	Amine	3.8	Cenex	8.00/gal			X ²
2,4-D	Weed-Rhap	Amine	3.8	Vertac	8.00/gal			X ²
2,4-D	Weedar 64	Amine	3.8	Union Carbide	8.00/gal			X
2,4-D	Amine 4 2,4-D Weed Killer	Amine	3.8	Platte Chemical	8.00/gal			X
Amitrol	Cytrol	Liquid	2	American Cyanamid	18.00/gal		X ³	
Amitrol	Weed Killer 90	Soluble powder	90%	American Cyanamid	6.13/lb		X ³	
Amitrol +			15%					
Simazine	Amizine	Wettable powder	45%	Union Carbide	5.10/gal		X ³	
Asulam	Asulox	Liquid	3.3	Rhone-Poulenc	39.10/gal	X	X	
Atrazine	AAtrex 4L	Liquid	4	Ciba-Geigy	10.10/gal	X	X	
Atrazine	AAtrex Nine -0	Granule	85%	Ciba-Geigy	2.35/lb	X	X	
Atrazine	AAtrex 80W	Wettable powder	76%	Ciba-Geigy	1.85/lb	X	X	
Dalapon	Dowpon Grass Killer	Powder	85%	Dow	1.95/lb	X		
Dalapon	Dowpon M Grass Killer	Powder	72%	Dow	1.75/lb	X	X ⁴	
Dicamba	Banvel CST	Amine	1	Velsicol	53.00/gal			X
Dicamba + 2,4-D	Banvel-520	Ester*	1.9	Velsicol		X		
Dicamba + 2,4-D	Banvel-720	Amine	1.9	Velsicol		X		
Dichlobenil	Casaron G-4	Granule	4%	Thompson-Hayward	1.10/lb		X	
Dichlobenil	Casaron W-50	Powder	50%	Thompson-Hayward	13.50/lb		X	
Dinitro	Contact Weed Killer	Liquid	30%	Wilbur-Ellis	10.65/gal	X		
Fosamine	Krenite	Liquid	4	DuPont	46.80/gal	X		
Glyphosate	Roundup	Liquid	4	Monsanto	68.00/gal	X	X	
Hexazinone	Velpar L	Liquid	2	DuPont	44.00/gal		X	
Hexazinone	Velpar	Soluble powder	90%	DuPont	20.00/lb		X	
Hexazinone	Pronone 10G	Granule	10%	Proserve	2.45/lb	X	X	
Hexazinone	Pronone 5G	Granule	5%	Proserve	1.60/lb	X	X	
Picloram	Tordon K	Liquid	2	Dow	85.90/gal	X		
Picloram	Tordon 22K	Liquid	2%	Dow	85.90/gal	X		
Picloram	Tordon 10K	Pellets	12%	Dow	3.80/lb	X		
Picloram + 2,4-D	Tordon 101	Amine	0.5 2	Dow	20.50/gal	X		X
Picloram + 2,4-D	Tordon 101R	Amine	0.3 1	Dow	16.90/gal			X
Picloram + 2,4-D	Tordon RTU	Amine	0.3 1	Dow	19.80/gal			X
Triclopyr	Garlon 4	Ester	4	Dow	69.50/gal	X	X	
Triclopyr	Garlon 3A	Amine	3	Dow	52.00/gal	X		

* Requires State waiver for summer application in Latah, Nez Perce, and Clearwater Counties.

¹Prices courtesy of Wilbur-Ellis Co. May 1984 (quoted for comparison purposes only).

²Hardwoods only.

³Directed spray.

⁴For conifer release apply only with atrazine.

COMMENTS ON SELECTED HERBICIDES

Some extra information is warranted for selected herbicides in this report. More information on these or the other herbicides can be obtained from the sources cited in the summary tables or from the manufacturer.

Atrazine

While atrazine has not been consistently effective in controlling pinegrass and elk sedge in the Inland Northwest, it has on occasion been effective. On an assortment of other grasses, mostly annual grasses, it has done well. Its cost advantage makes it a prime candidate for more detailed studies to improve its consistency.

Dalapon

Dalapon is generally quite effective on grasses, but results in the Northern Rocky Mountains have been inconsistent. As with atrazine, it is inexpensive and a candidate for study to improve its reliability. Studies in the Northern Rocky Mountains tend to weakly confirm the contention that a mix of dalapon and atrazine offers a broader spectrum of weed control and protection of some conifers from dalapon damage.

Garlon

Of the two Garlon formulations, Garlon 4 is more effective as a foliar spray on shrubs. Applications during the foliar season generally produce good control. Dormant applications in oil have proven effective west of the Cascades. Garlon 4 is labeled for conifer release sprays except over pines. Ponderosa and lodgepole pine are easily injured by foliar sprays. Western white pine appears more tolerant. Directed sprays should be used to prevent overspraying and injuring pines. Garlon 4 is effective on evergreen shrubs, especially if oil is added to the spray mixture. The oil-in-water emulsion readily penetrates the leathery perennial leaves producing good control of such species as *Ceanothus velutinus*. Garlon 4 is also effective as a basal spray on hardwood clumps.

The short residual toxicity provided by Garlon, plus its broad spectrum effectiveness on shrub species, makes Garlon a somewhat superior product for site preparation in some shrub communities.

As with Tordon, 2,4-D, and 2,4-DP, the tolerant grasses and sedges will occupy the holes created by Garlon control of the woody vegetation.

Garlon 3A is effective as a cut-stump treatment on hardwoods and is also effective for stem injection on hardwoods and conifers.

Roundup

Roundup is a broad-spectrum herbicide of considerable utility in both site preparation and conifer release. Evergreen plants, including conifers, are tolerant of Roundup except during the flushes of new growth when foliage is succulent and readily absorbs the chemical. It is strictly a foliage-active herbicide with little if any root absorp-

tion. Healthy active foliage is required to absorb enough chemical for translocation to all parts of the plant at toxic levels. Treatment of sprouting-established plants soon after burning or cutting will probably not be effective due to the dilution of a relatively small amount of absorbed chemical in a large root system. Results will also be poor on plants that are stressed or damaged.

Although Roundup is only marginally effective on evergreen plants, it may prove effective when applied during the spring growth flush if the proportion of new succulent to old, hardened foliage is relatively high, as with 1- to 3-year-old plants. When new, unhardened foliage is a small percentage of the total, damage will be restricted to the new growth. The addition of extra surfactant will often improve treatment effectiveness, especially on evergreen plants.

Although Roundup is a relatively broad-spectrum herbicide, in competitive communities with species in different phenological stages of development it may be difficult to treat at a time when all species are vulnerable or at a time when the competition is vulnerable and the crop is not. Late-season flushes of conifer growth may be damaged by Roundup application. Treating over crop trees during active growth requires shielding the trees from direct herbicide contact.

When used as a conifer release treatment with the chemical applied over unshielded trees, make sure that the new foliage has hardened (that is, has taken on the same color as older foliage) and that late-season growth flushes are not occurring. (These recommendations do not apply to western larch and may also be risky on western redcedar.) Foliage condition is a better indicator of the safe phenological stage than is bud set.

Because the effectiveness of Roundup varies inversely with the amount of water with which it is mixed, it should be applied with as little water as possible consistent with equipment capabilities and label restrictions. The standard for aerial spraying of shrub communities is 7.5 to 10 gal/acre total mix. Scattered low shrubs and grass and forb communities may be treated at lower total mix rates. Ultralow volume applications with spinning disk or wiper-type applicators are effective in many situations.

The high probability of rain during late May, June, and early July in the Inland Northwest makes treatments risky and difficult to schedule when herbaceous vegetation is most vulnerable.

While Roundup seems to have performed well for most users, for some it has been inconsistent under essentially identical conditions of application, vegetation, and weather.

Tordon Products

Tordon 101 and other Tordon products (products containing picloram) are effective in controlling a wide assortment of woody vegetation in site preparation treatments. Tordon's long soil residual toxicity requires that reforestation efforts not be undertaken within 7 to 8 months of application. Label-recommended waiting periods should be strictly adhered to. Grasses and sedges, if present on the treated site, will quickly fill the

gaps in the ecosystem created by the demise of the shrubs. Tordon cannot be used for conifer release.

Velpar and Pronone

Pronone, while not featured in any of the studies reported here, is similar to DuPont's gridballs and their DPX 3674-2-G, which have been used in several of the reported results.

Hexazinone, the active ingredient in both Velpar and Pronone (granular 5 or 10 percent) has proven particularly effective on Inland Northwest herbaceous vegetation. It acts both as a foliage and soil-active herbicide in the liquid formulation (Velpar L) and strictly as a soil-active chemical in the granular formulation. It has a moderately long soil residual. Both formulations have been applied to ponderosa pine throughout the growing season with little damage. Other species are less tolerant, especially to application during the spring growth flush. Western white pine and western larch are susceptible at any time of year.

These products have an advantage over chemicals that depend upon foliar absorption in that they can be applied at any time of the year (except on frozen ground or snow) or in any weather. Posttreatment precipitation is necessary to "activate" the soil-active action. Photo decomposition will tend to deactivate material that remains on the surface of soil or foliage for an extended period. This is probably more of a problem with the liquid formulation than with the granular one. Vegetation treated in late summer or fall will "green up" normally in the spring, then will die as the chemical is absorbed by the root system and translocated to the site of action in the foliage. Like its triazine relative atrazine, hexazinone appears to have a growth-stimulating effect beyond that provided by strict weed control.

On moderate to steeply sloping ground, the chemical has a pronounced tendency to move by gravity in the soil, thus displacing the treatment effect downslope when applied as spots or bands.

Hexazinone products have not controlled hardwood competition as well in the Inland Northwest as they have apparently done in the Southern States. However, due to their mode of action (root absorption and translocation to their site of activity in the photosynthetic system), they may be effective on sprouting plants.

2,4-D

The oldest and one of the most used of the modern synthetic herbicides, 2,4-D is available as either the ester

or amine formulation. The ester formulation generally produces better shrub control. For best results, it is most often used in combination with Garlon 4, picloram (as Tordon 101), dicamba, or other herbicides. 2,4-D now seems best suited for situations where, following harvest and site preparation, there is a rapid invasion of forbs such as fireweed (*Epilobium* spp.), astragalus, antennaria, and so forth. Its cost, in comparison to newer herbicides, makes it an attractive alternative where conditions warrant its use.

The low volatile ester formulation will volatilize and move off site if subjected to high temperatures (>90 °F, 32 °C). This can occur during midsummer applications. 2,4-D can volatilize from leaf surfaces and move off site on air currents even when ambient air temperatures are <90 °F due to the thermal characteristics of target surfaces. Injury to adjacent conifers may be insignificant, but agricultural and garden crops may be severely damaged. Grapes and tomatoes are sensitive to 2,4-D and are easily damaged by drift and vapors from nearby spraying. Extreme caution must be used when spraying 2,4-D ester near agricultural lands and homesites.

HOW TO HELP IN UPDATING INFORMATION

Recipients of this report who have additional information concerning the subject that they feel should be included are encouraged to make copies of, and fill out, the enclosed form on pages 64-66. Please return the form to the authors for incorporation into a future, updated report.

We are also investigating the feasibility of establishing accessible computer data sets at USDA Forest Service Fort Collins Computer Center and on AgNet for those having access to these systems.

SUMMARY TABLES OF HERBICIDE EFFECTS

Key to abbreviations:

"NT" under ADJUVANTS = Nalco-trol

"TV" under ADJUVANTS = Transvert

"SURFACT" under ADJUVANTS = Surfactant

"*" under % TOP-KILL YR 3 = TOP-KILL YEAR 4

In the following tables, the letters A through Z following reference numbers indicate separate study sites within the scope of the reference.

For a more detailed explanation of information in the tables, refer to the previous sections in this publication.

MOUNTAIN MAPLE (ACER GLABRUM)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	4	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	3	.	.	.	27
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	0	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	2	.	.	.	27
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	13	0	0	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	13	0	0	3	13
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	20	.	.	.	2	51
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	9	0	8	1	22
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	9	0	8	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	35	0	0	3	13
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	.	3	.	0	.	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	.	54	.	0	.	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	.	16	.	0	.	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	.	63	.	.	.	32
GARLON 3A	3 LB	WATER		10	L SUMMER	.	0	.	0	0	20
(GARLON 3A + ROUNDUP)	3 LB 0.5 LB	WATER		10	L SUMMER	.	.	.	.	.
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	22	.	0	0	57A
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	18	0	0	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	69	37	38	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	71	35	27	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	3	0	0	2	17
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	71	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	41	17	6	1	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	56	6	18	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	73	.	.	1	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	41	25	0	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	66	48	0	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	59	27	33	2	22
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	.	73	39	0	3	20
(GARLON 4 + 2,4-D ESTER)	1 LB 2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	.	.	.	.
(GARLON 4 + 2,4-D ESTER)	2 LB 2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	16	0	7	2	13
(GARLON 4 + 2,4-D ESTER)	2 LB 3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	18	0	30	3	13
(GARLON 4 + 2,4-D ESTER)	2 LB 1 LB	WATER	3 QT MORACT	15	L FOLIAR	.	67	.	.	5	57B
(GARLON 4 + 2,4-D ESTER)	2 LB 2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	85	55	14	2	22
(GARLON 4 + 2,4-D ESTER)	2 LB 2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	59	4	7	2	22
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	73	70	40	5	13
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	0	1	0	1	16
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	10	23	4	1	16
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	0	0	0	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	59	59	14	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	76	75	50	0	17
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	43	40	10	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	31	48	14	3	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	92	86	60	0	17
ROUNDUP	2 LB	WATER	1% R-11,NT	10.7	L FOLIAR	60	.	.	.	2	44F
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	90	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	8	46	5	3	16
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	48	56	40	3	16
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	40	.	.	.	4	44C
ROUNDUP	1 LB	WATER		10	L SUMMER	.	0	0	0	0	16

MOUNTAIN MAPLE (ACER GLABRUM)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	2 LB	WATER		10	L SUMMER	.	0	0	0	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	61	63	10	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	49	18	0	0	13
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	40	.	.	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	G20	L SUMMER	.	40	.	.	2	43B
ROUNDUP	2 LB	WATER		10	L SUMMER	20	50	.	.	0	50C
ROUNDUP	3 LB	WATER		10	L SUMMER	25	75	.	.	0	50D
ROUNDUP	3 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43J
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	100	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	60	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	40	.	.	.	52V
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER	1% SURFACT	10	L SUMMER	.	60	.	.	.	52X
(ROUNDUP +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	5% R-11,TV	10	L SUMMER	.	20	.	.	6	43A
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	14	0	0	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	.	.	80	.	31
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	50	0	0	.	13
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	.	19	.	0	.	32
TORDON 101	1 GAL	WATER		10	L SUMMER	.	35	8	0	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	97	92	83	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	35	23	20	.	13
(TORDON 101 +	1 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	14	0	0	.	13
(TORDON 101 +	1.5 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	10	0	0	.	13
VELPAR GB	10-20#	GRIDBAL			DORMANT	.	0	.	.	.	56
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
(VELPAR +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8% MORACT,TV	10	L SUMMER	.	.	0	.	4	43E
(VELPAR +	1 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8% MORACT,TV	10	L SUMMER	.	.	0	.	4	43G

SITKA ALDER (ALNUS SINUATA)

2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
(2,4-D +	2 LB					.	.	.	.	.
2,4-DP)	2 LB	WATER	8% MORACT,TV	10	L SUMMER	.	.	20*	.	4	43F
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
GARLON 4	4 LB	WATER	5% NT, MORACT	10	L FOLIAR	60	.	.	.	4	44B
(GARLON 4 +	3 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	100	.	.	5	57A
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	30	.	.	52R
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	60	.	.	.	2	58B
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	40	.	.	.	2	44D
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	80	.	.	52R

SITKA ALDER (ALNUS SINUATA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	60	.	.	.	4	44A
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	40	.	.	.	4	44C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43D
ROUNDUP	2 LB	WATER		10	L SUMMER	25	100	.	.	0	50B
ROUNDUP	2 LB	WATER		10	L SUMMER	0	75	.	.	0	50C
ROUNDUP	3 LB	WATER		10	L SUMMER	50	100	.	.	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	80	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52V

SERVICEBERRY (AMELANCHIER ALNIFOLIA)

2,4-D ESTER	0.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	3	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	12	.	.	.	27
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	75	75	75	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	43	.	.	.	27
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	91	75	63	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	93	77	69	3	13
2,4-D ESTER	0.5 LBHG	WATER		GDP	L FOLIAR	.	33	.	0	.	7
2,4-D ESTER	2 LBHG	WATER		GDP	L FOLIAR	.	50	.	0	.	7
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
2,4-D ESTER	4 LBHG	WATER		GDP	L FOLIAR	.	44	.	0	.	7
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	60	.	.	.	2	51
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	91	83	1	22
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	63	38	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	98	73	50	3	13
(2,4-D +	0.5 LBHG					.	.	.	.	.
AMITROL)	1 LBHG	WATER		GDP	L FOLIAR	.	43	.	0	.	7
AMITROL	4 LBHG	WATER		GDP	L FOLIAR	.	0	.	0	.	7
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	50	.	.	52R
GARLON 3A	3 LB	WATER		10	L SUMMER	.	14	.	0	0	20
(GARLON 3A +	3 LB					.	.	.	.	.
ROUNDUP)	0.5 LB	WATER		10	L SUMMER	.	23	.	6	0	57A
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	94	46	29	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	99	92	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	100	100	5	13
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	51	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	98	77	40	1	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	52	43	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	89	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	86	73	2	22
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	78	53	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	99	72	55	3	13
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	100	100	2	22
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	100	100	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	20	.	.	52R
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	100	93	86	5	13

SERVICEBERRY (AMELANCHIER ALNIFOLIA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	28	26	0	1	16
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	99	99	92	1	16
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	100	100	100	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	99	99	90	3	16
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	100	.	.	.	.	48
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	60	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	100	100	100	3	16
ROUNDUP	1 LB	WATER		10	L SUMMER	.	90	69	69	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	87	74	57	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	100	98	88	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	100	96	88	0	13
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52H
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	100	.	.	0	42
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52S
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	100	.	.	.	52S
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	100	.	.	.	52G
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	82	78	57	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	.	.	97	.	31
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	86	82	71	.	13
TORDON 101	1 GAL	WATER		10	L SUMMER	.	83	54	0	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	100	100	100	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	98	95	88	.	13
(TORDON 101 +	1 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	100	86	60	.	13
(TORDON 101 +	1.5 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	92	55	33	.	13
VELPAR G	1.4 LB	GRANULE		G	L SUMMER	.	60	.	.	.	52S
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	11	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19

BEARBERRY (ARCTOSTAPHYLOS UVA-URSI)

2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	60	.	.	52R
ROUNDUP	2 LB	WATER	.5%FIRECHEM	G10	E FOLIAR	20	.	.	.	.	47
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	0P	59C
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	0	.	.	.	0P	45

OREGON GRAPE (BERBERIS SPP.)

2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	0	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	20	.	.	.	2	51
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	60	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	0	.	.	.	52F
ATRAZINE	10 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52L
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	40	.	.	52R

OREGON GRAPE (BERBERIS SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	1 LB	WATER		S7	E FOLIAR	0	.	.	.	OP	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	60	.	.	.	OP	53C
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52L
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	40	.	.	.	2	58B
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	0	.	.	.	52H
ROUNDUP	3 LB	WATER		10	L SUMMER	.	0	.	.	.	52H
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52L

REDSTEM CEANOTHUS (CEANOTHUS SANGUINEUS)

2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	45	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	60	.	.	.	27
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	87	83	67	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	98	93	90	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	75	.	.	.	27
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	90	100	100	3	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	80	.	.	52R
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	79	0	33	1	22
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	50	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	50	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	92	88	78	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	99	98	93	3	13
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	.	82	.	.	.	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	.	100	.	100	.	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	.	80	.	.	.	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	.	75	.	.	.	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	60	.	.	52R
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	100	100	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	100	100	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	100	100	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	85	86	73	2	17
GARLON 4	2 LB	WATER	1%NT,MORACT	10.6	L FOLIAR	80	.	.	.	2	44K
GARLON 4	2 LB	WATER	3%NT,MORACT	10	L FOLIAR	80	.	.	.	2	44L
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	100	.	.	.	5	44B
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	89	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	94	95	88	1	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	100	100	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	98	38	85	2	22
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	96	92	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	100	100	3	13
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	98	87	64	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	20	.	.	52R
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	100	100	100	5	13
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	82	82	67	1	16

REDSTEM CEANOTHUS (CEANOTHUS SANGUINEUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	74	54	25	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	85	56	22	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	100	96	80	0	17
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	90	64	41	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	100	100	95	0	17
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	80	.	.	.	2	44D
ROUNDUP	2 LB	WATER	3% NT,DYE	10.6	L FOLIAR	80	.	.	.	2	44E
ROUNDUP	2 LB	WATER	1% R-11,NT	10.7	L FOLIAR	80	.	.	.	2	44F
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	90	.	.	52R
ROUNDUP	2 LB	WATER		10	L SUMMER	.	88	87	69	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	95	88	86	0	13
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	100	.	.	0	50A
ROUNDUP	2 LB	WATER		10	L SUMMER	25	100	.	.	0	50C
ROUNDUP	3 LB	WATER		10	L SUMMER	25	100	.	.	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	80	.	.	0	42
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52H
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	90	.	.	.	52H
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	40	.	.	.	52W
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	64	30	20	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	81	59	62	.	13
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	.	84	.	80	.	32
TORDON 101	1 GAL	WATER		10	L FOLIAR	.	1	0	0	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	100	100	100	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	91	100	100	.	13
(TORDON 101 +	1 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	94	95	71	.	13
(TORDON 101 +	1.5 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	65	21	0	.	13
WEEDONE 170	3 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	73	.	.	.	23
WEEDONE 170	6 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	100	.	.	.	23

SNOWBRUSH (SLICK LEAF) CEANOTHUS (CEANOTHUS VELUTINUS)

2,4-D ESTER	3 LB	OIL		10	DORMANT	.	.	50	.	3	39
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	.	.	40	.	3	39
2,4-D ESTER	4 LB	WATER		G25	E FOLIAR	.	71	70	25	.	14
2,4-D ESTER	2 LBHG	WATER	5% DIESEL	GDP	L FOLIAR	.	96	.	20	.	7
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	50	.	.	52R
2,4-D ESTER	4 LBHG	WATER	5% DIESEL	GDP	L FOLIAR	.	100	.	20	.	7
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	40	.	.	.	2	51
2,4-D ESTER	4 LB	WATER		G25	L FOLIAR	.	45	28	21	.	14
2,4-D ESTER	2 LB	WATER		10	L SUMMER	.	.	60	.	2	39
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	20	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	35	.	.	1	57E

SNOWBRUSH (SLICK LEAF) CEANOTHUS (CEANOTHUS VELUTINUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP %TOP %TOP KILL KILL KILL			PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	4 LB	WATER		G25	FALL	.	2	13	7	.	14
(2,4-DP +	2 LBHG					.	.	.	.	.
AMITROL)	4 LBHG	WATER		GDP	L FOLIAR	.	97	.	70	.	7
AMITROL	8 LBHG	WATER		GDP	L FOLIAR	.	32	.	0	.	7
GARLON 3A	4 LB	WATER		G25	E FOLIAR	.	93	94	57	.	14
GARLON 3A	4 LB	WATER		G25	L FOLIAR	.	65	60	43	.	14
GARLON 3A	4 LB	WATER		G25	FALL	.	0	3	0	.	14
GARLON 4	1 LB	OIL		10	DORMANT	.	90	.	.	1	39
GARLON 4	2 LB	OIL		10	DORMANT	.	.	95	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	95	.	3	39
GARLON 4	1.5LB	WATER		10	E FOLIAR	.	95	.	.	3	39
GARLON 4	2 LB	WATER	2 QT DIESEL	10	E FOLIAR	.	.	95	.	.	39
GARLON 4	4 LB	WATER		G25	E FOLIAR	.	87	91	75	.	14
GARLON 4	2 LB	WATER	1%NT,MORACT	10.6	L FOLIAR	60	.	.	.	2	44K
GARLON 4	2 LB	WATER	3%NT,MORACT	10	L FOLIAR	60	.	.	.	2	44L
GARLON 4	4 LB	WATER		G25	L FOLIAR	.	97	99	75	.	14
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	100	.	.	.	5	44B
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	75	.	3	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	76	70	52	2	20
GARLON 4	2 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	43	.	.	4	57E
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	99	96	90	2	20
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	.	97	97	90	3	20
GARLON 4	4 LB	WATER		G25	FALL	.	7	61	0	.	14
(GARLON 4 +	1 LB										
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	67	.	.	3	57E
(GARLON 4 +	1 LB										
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	30	.	.	2	57E
(GARLON 4 +	1.5 LB										
2,4-D ESTER)	1.5 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	76	.	.	3	57E
(GARLON 4 +	2 LB										
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	90	.	.	3	57E
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON K)	0.5 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON 101)	1 GAL	WATER		10	E FOLIAR	.	.	95	.	.	39
KRENITE	8 LB	WATER		G25	E FOLIAR	.	92	94	77	.	14
KRENITE	8 LB	WATER		G25	L FOLIAR	.	0	7	12	.	14
KRENITE	8 LB	WATER		G25	FALL	.	2	5	0	.	14
(TORDON K +	1 LB					.	.	.	.	.
2,4-D ESTER)	4 LB	WATER		10	E FOLIAR	.	.	90	.	.	39
ROUNDUP	1 LB	WATER		S7	E FOLIAR	20	.	.	.	OP	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	20	.	.	.	OP	53C
ROUNDUP	4 LB	WATER		G25	E FOLIAR	.	74	70	33	.	14
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	0	0	0	1	16
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	40	.	.	.	2	58B
ROUNDUP	2 LB	WATER	1% SURFACT	S10	L FOLIAR	60	.	.	.	.	49
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	80	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	0	0	10	3	16
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	100	.	.	.	4	44C
ROUNDUP	4 LB	WATER		G25	L FOLIAR	.	32	60	0	.	14
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	40	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	.	10	.	.	.	52G

SNOWBRUSH (SLICK LEAF) CEANOTHUS (CEANOTHUS VELUTINUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	30	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	20	.	.	.	52W
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	20	.	.	.	52S
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	20	.	.	.	52S
ROUNDUP	4 LB	WATER	1% SURFACT	10	L SUMMER	.	40	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER	1% SURFACT	10	L SUMMER	.	60	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER		10	L SUMMER	.	60	.	.	.	52X
ROUNDUP	4 LB	WATER		G25	FALL	.	0	3	0	.	14
(ROUNDUP +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	5% R-11,TV	10	L SUMMER	.	20	.	.	6	43A
TORDON 101	2 GAL	WATER		10	E FOLIAR	.	.	85	.	.	39
VELPAR G	1.4 LB	GRANULE		G	L SUMMER	.	30	.	.	.	52S
(VELPAR +	1 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8% MORACT,TV	10	L SUMMER	.	.	20	.	4	43G
2,4-DP	2 LBHG	WATER	5% DIESEL	GDP	L FOLIAR	.	99	.	50	.	7

OCEANSPRAY (HOLODISCUS DISCOLOR)

2,4-D ESTER	3 LB	OIL		10	DORMANT	.	.	60	.	3	39
2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	14	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	13	.	.	.	27
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	18	0	0	2	13
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	.	.	80	.	3	39
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	48	.	.	.	27
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	67	50	44	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	24	0	0	3	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	20	.	.	52R
2,4-D ESTER	2 LB	WATER		10	L SUMMER	.	.	80	.	2	39
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	23	18	0	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	34	0	0	3	13
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	.	81	.	.	.	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	.	100	.	100	.	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	.	32	.	0	.	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	.	82	.	.	.	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	20	.	.	52R
GARLON 4	1 LB	OIL		10	DORMANT	.	60	.	.	1	39
GARLON 4	2 LB	OIL		10	DORMANT	.	.	75	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	75	.	3	39
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	64	0	17	5	13
GARLON 4	1 LB	OIL		10	E FOLIAR	.	60	.	.	2	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	88	75	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	92	74	60	5	13
GARLON 4	4 LB	WATER	5% NT, MORACT	10	L FOLIAR	60	.	.	.	5	44B
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	32	2	0	1	13
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	80	.	3	39
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	69	34	0	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	79	22	0	3	13
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON K)	0.5 LB	WATER		10	E FOLIAR	.	.	95	.	.	39

OCEANSPRAY (HOLODISCUS DISCOLOR)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON 101)	1 GAL	WATER		10	E FOLIAR	.	.	95	.	.	39
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
(TORDON K +	1 LB					.	.	.	.	.
2,4-D ESTER)	4 LB	WATER		10	E FOLIAR	.	.	90	.	.	39
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	95	100	100	5	13
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	26	29	31	1	16
ROUNDUP	0.3 LB	WATER		51.5	L FOLIAR	40	.	.	.	OP	45
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	100	100	100	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	100	100	100	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	60	.	.	52R
ROUNDUP	2 LB	WATER		10	L SUMMER	.	46	16	33	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	83	67	75	0	13
ROUNDUP	2 LB	WATER		10	L SUMMER	20	70	.	.	0	50B
ROUNDUP	2 LB	WATER		10	L SUMMER	25	95	.	.	0	50C
ROUNDUP	3 LB	WATER		10	L SUMMER	35	90	.	.	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	100	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52G
ROUNDUP	3 LB	WATER		510	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	20	.	.	.	52V
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	23	1	9	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	79	72	60	.	13
TORDON 101	2 GAL	WATER		10	E FOLIAR	.	.	90	.	.	39
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	.	87	.	70	.	32
TORDON 101	1 GAL	WATER		10	L SUMMER	.	72	30	15	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	100	86	60	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	100	56	33	.	13
(TORDON 101 +	1.5 GAL	WATER				.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	95	98	71	.	13

RED TWINBERRY (LONICERA UTAHENSIS)

2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	58	0	33	1	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	30	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	0	.	.	.	2	51
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	58	58	67	1	22
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	510	L SUMMER	.	10	.	.	.	52F
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	30	.	.	52R
GARLON 3A	3 LB	WATER		10	L SUMMER	.	0	.	0	0	20
(GARLON 3A +	3 LB					.	.	.	.	.
ROUNDUP)	0.5 LB	WATER		10	L SUMMER	.	0	.	0	0	57A
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	50	60	60	1	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	64	71	71	1	13
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	44	90	79	2	22
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	73	30	0	2	13

RED TWINBERRY (LONICERA UTAHENSIS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL			PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
(GARLON 4 + 2,4-D ESTER)	3 LB 2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	.	.	.	.	57B
(GARLON 4 + 2,4-D ESTER)	1 LB 2 LB					.	61	.	.	5	
KRENITE	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	17	2	22
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	9	1	0	1	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	58	74	90	3	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	50	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	75	100	100	3	16
ROUNDUP	1 LB	WATER		10	L SUMMER	.	34	92	53	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	50	36	27	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	100	96	75	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	75	71	63	0	13
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	70	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52U
ROUNDUP	3 LB	WATER		10	L SUMMER	.	50	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52W
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52S
TORDON 101	1 GAL	WATER		10	L SUMMER	.	30	0	10	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	E FOLIAR	.	64	69	57	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	L SUMMER	.	0	0	13	.	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL 1 LB	WATER		10	L SUMMER	.	19	0	20	.	13
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19

FALSE HUCKLEBERRY (MENZIESIA FERRUGINEA)

2,4-D ESTER	2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	34	.	.	3	57B
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	0	.	.	52R
(2,4-D + 2,4-DP)	2 LB 2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	40*	.	4	43F
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	.	100	.	100	.	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	.	100	.	100	.	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	.	71	.	.	.	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	.	98	.	80	.	32
(GARLON 4 + 2,4-D ESTER)	3 LB 2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	46	.	.	5	57B
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	70	.	.	52R
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	20	.	.	1	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	20	.	.	1	43D
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	30	.	.	.	52I
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	40	.	.	.	52I
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52U
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52V
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	.	100	.	100	.	32

PACHISTIMA (PACHISTIMA MYRSINITES)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	0	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	0	.	.	.	2	51
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	0	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	0	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	0	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	0	.	.	.	52F
ATRAZINE	5 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52P
ATRAZINE	5 LB	WATER		S10	L FOLIAR	.	0	.	.	.	52Q
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52P
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
GARLON 4	2 LB	WATER	1%NT,MORACT	10.6	L FOLIAR	0	.	.	.	2	44K
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	0	.	.	.	5	44B
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	14	0	10	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	17	2	22
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	.	5	0	0	3	20
(GARLON 4 +	3 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	23	.	.	5	57B
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	2 LB	WATER	.5%FIRECHEM	G10	E FOLIAR	20	.	.	.	.	47
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52P
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	0	.	.	.	0P	45
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	0	0	0	1	16
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	0	.	.	.	2	58B
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	0	0	0	3	16
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	0	.	.	.	4	44A
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	0	.	.	.	4	44C
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	0	.	.	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	0	.	.	2	43B
ROUNDUP	3 LB	WATER	.6% R-11	10	L SUMMER	.	0	.	.	1	43J
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	0	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	.	10	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	10	.	.	.	52H
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	10	.	.	.	52H
ROUNDUP	3 LB	WATER		10	L SUMMER	.	0	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	0	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	10	.	.	.	52W
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	10	.	.	.	52Q
ROUNDUP	4 LB	WATER	1% SURFACT	10	L SUMMER	.	0	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER	1% SURFACT	10	L SUMMER	.	10	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER		10	L SUMMER	.	0	.	.	.	52X
(ROUNDUP +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	5%R-11,TV	10	L SUMMER	.	0	.	.	6	43A
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	.	.	0	.	31
TORDON 101	1 GAL	WATER	NT	15	L FOLIAR	.	40	.	13	.	15
(VELPAR +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	.	.	0	.	4	43E
(VELPAR +	1 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	.	.	0	.	4	43G

SYRINGA (PHILADEPHUS LEWISII)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL			PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	37	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	32	.	.	.	27
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	78	.	.	.	27
2,4-D ESTER	4 LB	WATER		10	L SUMMER	.	100	50	33	3	13
(ROUNDUP + GARLON 4)	2 LB 1 LB					.	.	.	.	.
TORDON 101	1 GAL	WATER		10	L SUMMER	.	0	0	0	0	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	L SUMMER	.	50	67	33	.	13
						
				10	E FOLIAR	.	100	100	100	.	13

NINEBARK (PHYSOCARPUS MALVACEUS)

2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	30	0	8	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	46	0	17	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	62	1	8	3	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	10	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	60	.	.	.	2	51
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	1	22
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	10	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	0	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	20	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
ATRAZINE	10 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52L
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52K
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52M
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	.	80	.	.	.	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	.	100	.	100	.	32
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52M
DICAMBA	2 LB	WATER		GDP	L FOLIAR	.	70	.	.	.	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	.	88	.	70	.	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	60	.	.	52R
GARLON 3A	3 LB	WATER		10	L SUMMER	.	0	.	0	0	20
(GARLON 3A + ROUNDUP)	3 LB 0.5 LB					.	.	.	.	.
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	0	0	57A
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	28	0	0	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	46	4	17	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	64	0	0	5	13
GARLON 4	2 LB	WATER	1%NT,MORACT	10.6	L FOLIAR	80	.	.	.	2	44K
GARLON 4	2 LB	WATER	3%NT,MORACT	10	L FOLIAR	100	.	.	.	2	44L
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	80	.	.	.	5	44B
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	1	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	9	2	22
(GARLON 4 + 2,4-D ESTER)	1 LB 2 LB					.	.	.	.	.
(GARLON 4 + 2,4-D ESTER)	2 LB 2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	41	0	0	2	13
(GARLON 4 + 2,4-D ESTER)	2 LB 1 LB					.	.	.	.	.
(GARLON 4 + 2,4-D ESTER)	1 LB 2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	37	0	14	3	13
						
				10	L SUMMER	.	0	0	0	2	22

NINEBARK (PHYSOCARPUS MALVACEUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
(GARLON 4 + 2,4-D ESTER)	2 LB					.	.	.	.	.
	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	10	.	.	52R
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	0	0	0	5	13
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	100	.	.	.	52L
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	50	.	.	.	52M
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	0	0	0	1	16
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	40	.	.	.	0P	45
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	82	68	22	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	100	100	100	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	37	26	18	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	85	83	67	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	43	62	25	3	16
ROUNDUP	2 LB	WATER	3% NT,DYE	10.6	L FOLIAR	80	.	.	.	2	44E
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	80	.	.	.	.	48
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	80	80	80	3	16
ROUNDUP	1 LB	WATER		10	L SUMMER	.	27	18	0	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	56	40	21	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	25	100	.	.	0	50C
ROUNDUP	3 LB	WATER		10	L SUMMER	30	95	.	.	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	100	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52S
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	90	.	.	.	52S
ROUNDUP	4 LB	WATER	1% SURFACT	10	L SUMMER	.	90	.	.	.	52X
(ROUNDUP + GARLON 4)	2 LB					.	.	.	.	.
	1 LB	WATER		10	L SUMMER	.	19	0	0	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	40	9	11	.	13
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	.	86	.	70	.	32
TORDON 101	1 GAL	WATER		10	L SUMMER	.	30	0	0	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL					.	.	.	.	.
	2 LB	WATER		10	E FOLIAR	.	93	79	67	.	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL					.	.	.	.	.
	1 LB	WATER		10	E FOLIAR	.	100	97	75	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL					.	.	.	.	.
	2 LB	WATER		10	L SUMMER	.	96	43	17	.	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL					.	.	.	.	.
	1 LB	WATER		10	L SUMMER	.	88	50	10	.	13
VELPAR GB	10-20#	GRIDBAL			DORMANT	.	0	.	.	.	56
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	60	.	.	.	52K
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	60	.	.	.	52K
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	70	.	.	.	52L
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52M
VELPAR C	1.4 LB	GRANULE		G	L SUMMER	.	70	.	.	.	52S
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR G	2 LB	GRANULE		S	FALL	.	20	.	.	.	52B
VELPAR G	4 LB	GRANULE		S	FALL	.	70	.	.	.	52B

QUAKING ASPEN (POPULUS TREMULOIDES)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	20	.	.	52R
2,4-D ESTER	4 LB	WATER		G100	FALL	.	85	.	.	0	46A
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	40	.	.	52R
GARLON 3A	8 LB	WATER		G100	FALL	.	20	.	.	2	46A
(GARLON 3A +	2 LB					.	.	.	.	.
TORDON 101)	4 LB	WATER		G100	FALL	.	50	.	.	2	46A
GARLON 4	4 LB	WATER		G100	FALL	.	30	.	.	2	46A
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	100	.	.	52R
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	100	.	.	0	50A

CHERRY (PRUNUS SPP.)

2,4-D ESTER	3 LB	OIL		10	DORMANT	.	.	50	.	3	39
2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	6	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	13	.	.	.	27
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	40	.	.	.	27
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	40	.	.	.	2	51
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	50	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	44	29	50	3	13
GARLON 3A	3 LB	WATER		10	L SUMMER	.	42	.	15	0	20
(GARLON 3A +	3 LB					.	.	.	.	.
ROUNDUP)	0.5 LB	WATER		10	L SUMMER	.	19	.	63	0	57A
GARLON 4	1 LB	OIL		10	DORMANT	.	50	.	.	1	39
GARLON 4	2 LB	OIL		10	DORMANT	.	.	60	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	60	.	3	39
GARLON 4	1 LB	OIL		10	E FOLIAR	.	40	.	.	2	39
GARLON 4	1.5LB	WATER		10	E FOLIAR	.	70	.	.	3	39
GARLON 4	2 LB	WATER	2 QT DIESEL	10	E FOLIAR	.	.	85	.	.	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	0	0	31	2	17
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	56	48	33	1	13
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	75	.	3	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	72	3	50	3	13
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON K)	0.5 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON 101)	1 GAL	WATER		10	E FOLIAR	.	.	95	.	.	39
(TORDON K +	1 LB					.	.	.	.	.
2,4-D ESTER)	4 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	67	0	17	5	13
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	100	100	100	1	16
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	0	0	17	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	8	28	13	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	100	100	100	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	60	.	.	.	2	58B
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	6	13	27	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	85	87	71	0	17
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	86	100	100	3	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	20	29	40	0	16
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	93	100	100	0	13

CHERRY (PRUNUS SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	60	.	.	0	50A
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52W
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	100	75	75	.	13
TORDON 101	2 GAL	WATER		10	E FOLIAR	.	.	90	.	.	39
(TORDON 101 + 1 GAL						.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	80	100	100	.	13
(VELPAR + 1 LB						.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	40	.	4	43G

CASCARA BUCKTHORN (RHAMNUS PURSHIANA)

2,4-D ESTER	3 LB	OIL		10	DORMANT	.	.	50	.	3	39
2,4-D ESTER	2 LB	WATER		10	L SUMMER	.	.	80	.	2	39
GARLON 4	1 LB	OIL		10	DORMANT	.	85	.	.	1	39
GARLON 4	2 LB	OIL		10	DORMANT	.	.	90	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	90	.	3	39
GARLON 4	1 LB	OIL		10	E FOLIAR	.	75	.	.	2	39
GARLON 4	1.5LB	WATER		10	E FOLIAR	.	90	.	.	3	39
GARLON 4	2 LB	WATER	2 QT DIESEL	10	E FOLIAR	.	.	90	.	.	39
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	75	.	3	39
(GARLON 4 + 2 LB						.	.	.	.	.
TORDON K)	0.5 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
(GARLON 4 + 2 LB						.	.	.	.	.
TORDON 101)	1 GAL	WATER		10	E FOLIAR	.	.	95	.	.	39
(TORDON K + 1 LB						.	.	.	.	.
2,4-D ESTER)	4 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
TORDON 101	2 GAL	WATER		10	E FOLIAR	.	.	90	.	.	39

CURRANT (RIBES SPP.)

2,4-D ESTER	0.83 LB	WATER		D	E FOLIAR	.	0	.	0	.	25
2,4-D ESTER	0.42 LB	WATER		D	E FOLIAR	.	100	.	100	.	25
2,4-D ESTER	0.62 LB	WATER		D	E FOLIAR	.	99	.	94	.	25
2,4-D ESTER	0.83 LB	WATER		D	E FOLIAR	.	100	.	100	.	25
2,4-D ESTER	1.25 LB	WATER		D	E FOLIAR	.	60	.	75	.	25
2,4-D ESTER	1.67 LB	WATER		D	E FOLIAR	.	100	.	100	.	25
2,4-D ESTER	1.67 LB	WATER		D	E FOLIAR	.	0	.	0	.	25
2,4-D ESTER	1.25 LB	WATER		D	E FOLIAR	.	100	.	100	.	25
2,4-D ESTER	2.5 LB	WATER		D	E FOLIAR	.	100	.	100	.	25
2,4-D ESTER	2.5 LB	WATER		D	E FOLIAR	.	0	.	0	.	25
2,4-D ESTER	3.33 LB	WATER		D	E FOLIAR	.	0	.	0	.	25
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G15	E FOLIAR	.	30	.	0	.	23
2,4-D ESTER	0.83 LB	WATER		G	L FOLIAR	.	18	.	.	.	25
2,4-D ESTER	0.83 LB	WATER		D	L FOLIAR	.	38	.	20	.	25
2,4-D ESTER	0.42 LB	WATER		D	L FOLIAR	.	83	.	92	.	25
2,4-D ESTER	0.62 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	0.83 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	0.83 LB	WATER		G	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	1.25 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	1.67 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	2.5 LB	WATER		D	L FOLIAR	.	100	.	100	.	25

CURRANT (RIBES SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	2.5 LB	WATER		G	L FOLIAR	.	84	.	60	.	25
2,4-D ESTER	2.5 LB	WATER		D	L FOLIAR	.	42	.	20	.	25
2,4-D ESTER	2.5 LB	WATER		G	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	10	.	.	52R
2,4-D ESTER	4.2 LB	WATER		G	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	4.2 LB	WATER		D	L FOLIAR	.	95	.	80	.	25
2,4-D ESTER	4.2 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	5.8 LB	WATER		G	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	5.8 LB	WATER		G	L FOLIAR	.	87	.	60	.	25
2,4-D ESTER	5.8 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	7.5 LB	WATER		G	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	7.5 LB	WATER		D	L FOLIAR	.	100	.	100	.	25
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	50	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	66	.	.	.	23
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	40	.	.	.	23
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	17	.	.	1	57E
2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	4	.	.	.	27
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	67	67	67	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
BK 800	1 GAL	WATER		G15	E FOLIAR	.	86	.	72	5	57D
BK 800	1.5 GAL	WATER		G15	E FOLIAR	.	90	.	89	5	57D
BK 875	1 GAL	WATER		G15	E FOLIAR	.	54	.	40	5	57D
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	E FOLIAR	.	76	.	50	.	23
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	E FOLIAR	.	70	.	63	.	57D
GARLON 4	2 LB	DIESEL		G15	E FOLIAR	.	88	.	85	5	57D
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	0	9	17	2	17
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	59	.	.	.	23
GARLON 4	2 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	49	.	.	4	57E
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	.	97	96	60	3	20
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		G15	E FOLIAR	.	55	.	47	5	57D
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	28	.	.	3	57E
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	29	.	.	2	57E
(GARLON 4 +	1.5 LB					.	.	.	.	.
2,4-D ESTER)	1.5 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	55	.	.	3	57E
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G10	L SUMMER	.	27	.	.	3	57E
(GARLON 4 +	1 LB					.	.	.	.	.
TORDON K)	1 QT	WATER		G15	E FOLIAR	.	41	.	27	5	57D
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	2 LB	WATER		G15	E FOLIAR	.	20	.	0	.	23
ROUNDUP	2 LB	WATER		G15	E FOLIAR	.	86	.	66	5	57D
ROUNDUP	2 LB	WATER	1% R-11	G15	E FOLIAR	.	78	.	37	5	57D
ROUNDUP	2 LB	WATER	2% R-11	G15	E FOLIAR	.	71	.	51	5	57D
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	15	28	15	5	13
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	40	.	.	.	0P	45
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	0	45	0	1	16

CURRENT (RIBES SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	0	0	0	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	0	0	0	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	0	0	14	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	75	62	50	0	17
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	80	.	.	.	2	44D
ROUNDUP	2 LB	WATER	<1% NT	10.6	L FOLIAR	60	.	.	.	1	44G
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	80	.	.	.	.	48
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	30	.	.	52R
ROUNDUP	4 LB	WATER		G20	L FOLIAR	60	.	.	.	6	46B
ROUNDUP	1 LB	WATER		G15	L SUMMER	.	0	.	.	.	23
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	50	33	0	0	13
ROUNDUP	2 LB	WATER		G15	L SUMMER	.	47	.	.	.	23
ROUNDUP	3 LB	WATER		10	L SUMMER	.	30	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52U
ROUNDUP	3 LB	WATER		10	L SUMMER	.	60	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	4 LB	WATER	1% SURFACT	10	L SUMMER	.	40	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER	1% SURFACT	10	L SUMMER	.	40	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER		10	L SUMMER	.	50	.	.	.	52X
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	13	17	0	.	13
TORDON 101	1 GAL	WATER		G15	E FOLIAR	.	25	.	15	5	57D
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	79	64	45	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	88	81	50	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		G15	E FOLIAR	.	68	.	51	5	57D
VELPAR L	2 LB	WATER		G15	E FOLIAR	.	0	.	5	5	57D
WEEDONE 170	3 QT	WATER		G15	E FOLIAR	.	41	.	7	.	23
WEEDONE 170	1 GAL	WATER		G15	E FOLIAR	.	48	.	26	5	57D
WEEDONE 170	3 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	61	.	.	.	23
WEEDONE 170	6 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	89	.	.	.	23

WILD ROSE (ROSA SPP.)

2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	15	21	13	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	17	21	25	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	52	1	33	3	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	30	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	40	.	.	.	2	51
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	22	63	50	1	22
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	20	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	20	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	67	76	40	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	29	35	13	3	13
ATRAZINE	10 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52L

WILD ROSE (ROSA SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
ATRAZINE	4 LB	WATER		S10	L SUMMER	.	10	.	.	.	52O
BK 800	1 GAL	WATER		G15	E FOLIAR	.	100	.	100	5	57D
BK 800	1.5 GAL	WATER		G15	E FOLIAR	.	100	.	100	5	57D
BK 875	1 GAL	WATER		G15	E FOLIAR	.	95	.	80	5	57D
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52M
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
DALAPON	7.4 LB	WATER		S10	L SUMMER	.	10	.	.	.	52O
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	50	.	.	52R
GARLON 3A	3 LB	WATER		10	L SUMMER	.	60	.	0	0	20
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	93	73	53	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	92	81	44	5	13
GARLON 4	2 LB	DIESEL	G	15	E FOLIAR	.	100	.	67	5	57D
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	88	75	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	58	0	33	2	17
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	68	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	87	75	1	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	80	67	67	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	87	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	64	90	83	2	22
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	77	66	53	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	89	75	40	3	13
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	83	65	75	2	22
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	38	100	100	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	93	90	40	5	13
ROUNDUP	2 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52N
ROUNDUP	2 LB	WATER		G15	E FOLIAR	.	78	.	33	5	57D
ROUNDUP	2 LB	WATER	1% R-11	G15	E FOLIAR	.	92	.	50	5	57D
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	80	.	.	.	52L
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	20	.	.	.	OP	45
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	25	2	50	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	60	62	29	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	100	96	80	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	40	.	.	.	2	58B
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	45	40	31	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	78	93	86	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	100	100	100	3	16
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	.	20	.	.	.	40A
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
ROUNDUP	2 LB	WATER		10	L SUMMER	.	26	0	0	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	15	0	8	0	13
ROUNDUP	2 LB	WATER		S10	L SUMMER	.	40	.	.	.	52O
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	100	.	.	.	52H
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	90	.	.	.	52H

WILD ROSE (ROSA SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	3 LB	WATER		10	L SUMMER	.	60	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52W
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52S
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	90	.	.	.	52S
ROUNDUP	4 LB	WATER	1% SURFACT	10	L SUMMER	.	100	.	.	.	52X
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER		10	L SUMMER	.	100	.	.	.	52X
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	45	0	9	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	.	.	100	.	31
TORDON 101	1 GAL	WATER		G15	E FOLIAR	.	100	.	100	5	57D
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	86	93	88	.	13
TORDON 101	1 GAL	WATER		10	L SUMMER	.	66	80	60	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	93	98	99	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	100	95	91	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	77	67	50	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	94	94	67	.	13
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	70	.	.	.	52L
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52M
VELPAR G	1.4 LB	GRANULE		G	L SUMMER	.	70	.	.	.	52S
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	2 LB	WATER		S10	L SUMMER	.	30	.	.	.	52O
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
(VELPAR +	1 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	20	.	4	43G

THIMBLEBERRY (RUBUS PARVIFLORUS)

2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	0	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	9	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	0	3	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	10	.	.	52R
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	33	1	22
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	20	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
(2,4-D +	2 LB					.	.	.	.	.
2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	0*	.	4	43F
(2,4-DP +	1 LBHG					.	.	.	.	.
DICAMBA)	1 LBHG	DIESEL		GDP	DORMANT	.	100	.	10	.	35
AMITROL	1 LBHG	WATER		GDP	E FOLIAR	.	84	.	10	.	33
AMITROL	3 LBHG	WATER		GDP	E FOLIAR	.	90	.	20	.	33
AMITROL	1 LBHG	WATER		GDP	L FOLIAR	.	51	.	0	.	33
AMITROL	3 LBHG	WATER		GDP	L FOLIAR	.	80	.	0	.	33

THIMBLEBERRY (RUBUS PARVIFLORUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL			PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
(2,4-D +	1 LBHG					.	.	.	.	.
DICAMBA)	1 LBHG	DIESEL		GDP	DORMANT	.	100	.	0	.	35
DICAMBA	1 LBHG	DIESEL		GDP	DORMANT	.	100	.	0	.	35
DICAMBA	1 LBHG	WATER		GDP	E FOLIAR	.	81	.	0	.	33
DICAMBA	3 LBHG	WATER		GDP	E FOLIAR	.	76	.	20	.	33
DICAMBA	1 LBHG	WATER		GDP	L FOLIAR	.	59	.	0	.	33
DICAMBA	3 LBHG	WATER		GDP	L FOLIAR	.	92	.	0	.	33
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	10	.	.	52R
GARLON 3A	0.75 LB	WATER		G16	L SUMMER	.	67	.	.	.	57C
GARLON 3A	1.5 LB	WATER		G16	L SUMMER	.	79	.	.	.	57C
GARLON 3A	3 LB	WATER		10	L SUMMER	.	0	.	0	0	20
GARLON 3A	4.5 LB	WATER		G16	L SUMMER	.	45	.	.	.	57C
(GARLON 3A +	3 LB					.	.	.	.	.
ROUNDUP)	0.5 LB	WATER		10	L SUMMER	.	75	.	50	0	57A
GARLON 4	1 LB	OIL		10	DORMANT	.	40	.	.	1	39
GARLON 4	2 LB	OIL		10	DORMANT	.	.	50	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	50	.	3	39
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	8	5	13
GARLON 4	1 LB	OIL		10	E FOLIAR	.	55	.	.	2	39
GARLON 4	1.5 LB	WATER		10	E FOLIAR	.	70	.	.	3	39
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	65	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	38	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	E FOLIAR	.	40	0	25	5	57D
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	47	7	24	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	33	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	80	.	.	.	18
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	98	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	0	0	0	2	17
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	100	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	69	.	.	.	18
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	1	13
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	60	.	3	39
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	0	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	66	66	38	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	3	2	6	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	12	2	22
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	42	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	80	.	.	.	18
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	.	54	26	53	3	20
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	0	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	0	3	13
(GARLON 4 +	3 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	37	.	.	5	57B
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	2	22
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	2	22
(GARLON 4 +	1 LB					.	.	.	.	.
TORDON K)	1 QT	WATER		G15	E FOLIAR	.	75	.	60	5	57D

THIMBLEBERRY (RUBUS PARVIFLORUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
(GARLON 4 + TORDON K)	2 LB 0.5 LB	WATER		10	E FOLIAR	.	.	.	.	.	39
(GARLON 4 + TORDON 101)	2 LB 1 GAL	WATER		10	E FOLIAR	.	.	90	.	.	39
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
PICLORAM	1 LBHG	WATER		GDP	E FOLIAR	.	100	.	70	.	33
PICLORAM	1 LBHG	WATER		GDP	L FOLIAR	.	100	.	80	.	33
TORDON 10K	10 LB	GRANULE		G	L FOLIAR	.	40	.	.	.	8
TORDON 10K	30 LB	GRANULE		G	L FOLIAR	.	40	.	.	.	8
(TORDON K + 2,4-D ESTER)	1 LB 4 LB	WATER		10	E FOLIAR	.	.	.	.	.	39
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	73	60	47	5	13
ROUNDUP	2 LB	WATER		G15	E FOLIAR	.	38	.	25	5	57D
ROUNDUP	2 LB	WATER	1% R-11	G15	E FOLIAR	.	70	.	40	5	57D
ROUNDUP	2 LB	WATER	2% R-11	G15	E FOLIAR	.	6	.	25	5	57D
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	38	49	27	1	16
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	99	89	92	1	16
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	8	0	23	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	90	86	63	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	85	90	60	0	17
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	54	44	42	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	88	95	82	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	100	100	100	3	16
ROUNDUP	2 LB	WATER	3% NT,DYE	10.6	L FOLIAR	100	.	.	.	2	44E
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	100	100	100	3	16
ROUNDUP	1 LB	WATER		10	L SUMMER	.	81	92	89	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	64	89	86	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	75	41	31	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	60	19	11	0	13
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	80	.	.	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	20	.	.	2	43B
ROUNDUP	2 LB	WATER		10	L SUMMER	25	85	.	.	0	50B
ROUNDUP	2 LB	WATER		10	L SUMMER	25	75	.	.	0	50C
ROUNDUP	3 LB	WATER		10	L SUMMER	30	95	.	.	0	50D
ROUNDUP	3 LB	WATER	.6% R-11	10	L SUMMER	.	20	.	.	1	43J
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	70	.	.	.	52G
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	100	.	.	.	52H
ROUNDUP	3 LB	WATER		10	L SUMMER	.	40	.	.	.	52V
(ROUNDUP + GARLON 3A)	4 LB 0.33 LB	WATER	1% SURFACT	10	L SUMMER	.	40	.	.	.	52X
(ROUNDUP + GARLON 3A)	4 LB 0.33 LB	WATER		10	L SUMMER	.	60	.	.	.	52X
(ROUNDUP + 2,4-D,2,4-DP)	2 LB 2 LB	WATER	5% R-11,TV	10	L SUMMER	.	0	.	.	6	43A
(ROUNDUP + GARLON 4)	2 LB 1 LB	WATER		10	L SUMMER	.	41	0	9	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	0	0	23	.	13
TORDON 101	1 GAL	WATER		G15	E FOLIAR	.	0	.	25	5	57D
TORDON 101	1 GAL	WATER		10	L SUMMER	.	68	0	21	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	E FOLIAR	.	.	.	.	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		G15	E FOLIAR	.	74	.	80	5	57D

THIMBLEBERRY (RUBUS PARVIFLORUS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
(TORDON 101 + 2,4-D ESTER)	1.5 GAL 1 LB	WATER		10	E FOLIAR	.	73	80	71	.	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	L SUMMER	.	76	0	5	.	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL 1 LB	WATER		10	L SUMMER	.	83	6	13	.	13
VELPAR L	2 LB	WATER		G15	E FOLIAR	.	54	.	40	5	57D
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
(VELPAR + 2,4-D,2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	0	.	4	43E
(VELPAR + 2,4-D,2,4-DP)	1 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	0	.	4	43G
2,4-DP	1 LBHG	DIESEL		GDP	DORMANT	.	100	.	0	.	35
WEEDONE 170	2 QT	DIESEL		GDP	DORMANT	.	100	.	0	.	35
WEEDONE 170	2 QT	WATER		GDP	E FOLIAR	.	90	.	20	.	33
WEEDONE 170	1 GAL	WATER		G15	E FOLIAR	.	0	.	0	5	57D
WEEDONE 170	2 QT	WATER		GDP	L FOLIAR	.	87	.	10	.	33
WEEDONE 170	3 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	0	.	.	.	23
WEEDONE 170	6 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	0	.	.	.	23

TRAILING BLACKBERRY (RUBUS SPP.)

2,4-D ESTER	1 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	45	.	.	.	57C
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	62	.	.	.	57C
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	0	0	0	3	13
2,4-D ESTER	1 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	70	.	.	.	57C
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	39	.	.	.	57C
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	72	.	.	.	57C
2,4-D ESTER	1 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	87	.	.	.	57C
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	94	.	.	.	57C
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	49	0	21	1	22
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	50	0	33	3	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	58	.	.	.	57C
GARLON 3A	0.75 LB	WATER		G16	L SUMMER	.	84	.	.	.	57C
GARLON 3A	1.5 LB	WATER		G16	L SUMMER	.	55	.	.	.	57C
GARLON 3A	4.5 LB	WATER		G16	L SUMMER	.	100	.	.	.	57C
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	83	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	60	20	40	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	30	70	60	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	94	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	99	.	.	.	18
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	98	.	.	.	18
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	99	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	98	.	.	.	18
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	98	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	100	100	3	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	100	100	2	22
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	98	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	99	.	.	.	18
(GARLON 4 + 2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	42	48	40	2	22

TRAILING BLACKBERRY (RUBUS SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL			PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	0	0	0	0	17
ROUNDUP	1.5 LB	WATER		5	L FOLIAR	.	0	0	0	0	57D
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	0	0	12	0	17
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	0	0	0	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	75	36	40	0	17
ROUNDUP	3 LB	WATER		10	L SUMMER	.	30	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	20	.	.	.	52U
ROUNDUP	3 LB	WATER		10	L SUMMER	.	70	.	.	.	52W
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	17	0	0	0	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	0	0	17	.	13

UPLAND WILLOW (SALIX SPP.)

2,4-D ESTER	3 LB	OIL		10	DORMANT	.	.	50	.	3	39
2,4-D ESTER	0.75 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	14	.	.	.	27
2,4-D ESTER	1.5 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	0	.	.	.	27
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	.	.	70	.	3	39
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	7.5	E FOLIAR	.	31	.	.	.	27
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	80	.	.	.	2	51
2,4-D ESTER	2 LB	WATER		10	L SUMMER	.	.	65	.	2	39
(2,4-D +	2 LB					.	.	.	.	.
2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	40*	.	4	43F
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	.	98	.	80	.	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	.	93	.	80	.	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	.	80	.	60	.	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	.	100	.	100	.	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	30	.	.	52R
GARLON 3A	3 LB	WATER		10	L SUMMER	.	0	.	0	0	20
GARLON 4	2 LB	OIL		10	DORMANT	.	.	85	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	85	.	3	39
GARLON 4	1 LB	OIL		10	E FOLIAR	.	70	.	.	2	39
GARLON 4	1.5 LB	WATER		10	E FOLIAR	.	80	.	.	3	39
GARLON 4	2 LB	WATER	2 QT DIESEL	10	E FOLIAR	.	.	85	.	.	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	58	42	50	2	17
GARLON 4	2 LB	WATER	1% NT, MORACT	10.6	L FOLIAR	40	.	.	.	2	44K
GARLON 4	4 LB	WATER	5% NT, MORACT	10	L FOLIAR	60	.	.	.	5	44B
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	70	.	3	39
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	100	100	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON K)	0.5 LB	WATER		10	E FOLIAR	.	.	90	.	.	39
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON 101)	1 GAL	WATER		10	E FOLIAR	.	.	90	.	.	39
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	20	.	.	52R
(TORDON K +	1 LB					.	.	.	.	.
2,4-D ESTER)	4 LB	WATER		10	E FOLIAR	.	.	90	.	.	39
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	61	58	25	5	13
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	0	0	27	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	55	3	33	0	17

UPLAND WILLOW (SALIX SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	80	67	64	0	17
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	21	16	33	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	100	100	100	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	18	49	33	3	16
ROUNDUP	2 LB	WATER	<1% NT	10.6	L FOLIAR	60	.	.	.	1	44G
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	100	.	.	.	.	48
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	60	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	55	26	40	3	16
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	60	.	.	.	4	44A
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	60	.	.	.	4	44C
ROUNDUP	1 LB	WATER		10	L SUMMER	.	2	0	0	0	16
ROUNDUP	2 LB	WATER		G15	L SUMMER	.	100	.	.	.	23
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	80	.	.	0	50A
ROUNDUP	2 LB	WATER		10	L SUMMER	15	100	.	.	0	50B
ROUNDUP	2 LB	WATER		10	L SUMMER	15	80	.	.	0	50C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	2	43B
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43D
ROUNDUP	2 LB	WATER		10.5	L SUMMER	.	80	.	.	0	62A
ROUNDUP	2 LB	WATER		10.5	L SUMMER	.	40	.	.	0	62B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	.	100	.	.	0	62C
ROUNDUP	2 LB	WATER		10.5	L SUMMER	.	20	.	.	0	62D
ROUNDUP	2 LB	WATER		10.5	L SUMMER	.	80	.	.	0	62E
ROUNDUP	2 LB	WATER		10.5	L SUMMER	.	20	.	.	0	62F
ROUNDUP	3 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43J
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	.	100	.	.	0	42
ROUNDUP	3 LB	WATER		10	L SUMMER	25	15	.	.	0	50D
ROUNDUP	3 LB	WATER		10	L SUMMER	.	50	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52U
ROUNDUP	3 LB	WATER		10	L SUMMER	.	60	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52W
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52G
(ROUNDUP +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	5% R-11,TV	10	L SUMMER	.	40	.	.	6	43A
TORDON 101	2 GAL	WATER		10	E FOLIAR	.	.	85	.	.	39
TORDON 101	1 GAL	WATER	NT	15	L FOLIAR	.	95	.	63	.	15
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	.	79	.	.	.	32
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	83	33	33	.	13
VELPAR GB	10-20/	GRIDBAL			L SUMMER	.	80	.	.	.	55
VELPAR GB	10-20#	GRIDBAL			DORMANT	.	0	.	.	.	56
VELPAR GB	1-8SHRUB	GRIDBAL			E FOLIAR	0	.	.	.	.	55
(VELPAR +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	.	.	20	.	4	43E
(VELPAR +	1 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	.	.	20	.	4	43G

ELDERBERRY (SAMBUCUS SPP.)

2,4-D ESTER	3 LB	OIL		10	DORMANT	.	.	60	.	3	39
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ELDERBERRY (SAMBUCUS SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL			PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	.	.	80	.	3	39
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	100	.	.	.	23
2,4-D ESTER	2 LB	WATER		10	L SUMMER	.	.	70	.	2	39
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	70	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	100	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	100	.	.	.	23
GARLON 3A	3 LB	WATER		10	L SUMMER	.	59	.	12	0	20
(GARLON 3A +	3 LB					.	.	.	.	.
ROUNDUP)	0.5 LB	WATER		10	L SUMMER	.	97	.	0	0	57A
GARLON 4	1 LB	OIL		10	DORMANT	.	40	.	.	1	39
GARLON 4	2 LB	OIL		10	DORMANT	.	.	60	.	.	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	.	.	60	.	3	39
GARLON 4	1 LB	OIL		10	E FOLIAR	.	80	.	.	2	39
GARLON 4	1.5LB	WATER		10	E FOLIAR	.	90	.	.	3	39
GARLON 4	2 LB	WATER	2 QT DIESEL	10	E FOLIAR	.	.	95	.	.	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	93	91	69	2	17
GARLON 4	1.5 LB	WATER		10	L SUMMER	.	.	85	.	3	39
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	100	.	.	.	23
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON K)	0.5 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
(GARLON 4 +	2 LB					.	.	.	.	.
TORDON 101)	1 GAL	WATER		10	E FOLIAR	.	.	95	.	.	39
(TORDON K +	1 LB					.	.	.	.	.
2,4-D ESTER)	4 LB	WATER		10	E FOLIAR	.	.	95	.	.	39
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	94	65	33	1	16
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	100	85	78	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	100	99	91	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	90	90	80	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	100	100	100	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	99	100	100	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	93	100	100	3	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	90	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	100	100	100	3	16
ROUNDUP	1 LB	WATER		G15	L SUMMER	.	100	.	.	.	23
ROUNDUP	1 LB	WATER		10	L SUMMER	.	78	78	33	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	81	81	80	0	16
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	80	.	.	0	50A
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
TORDON 101	2 GAL	WATER		10	E FOLIAR	.	.	95	.	.	39
(VELPAR +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	.	.	20	.	4	43E

MOUNTAIN ASH (SORBUS SCOPULINA)

(GARLON 4 +	3 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	30	.	.	5	57B
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	40	.	.	.	52G
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	.	.	90	.	31

SPIREA (SPIREA BETULAFOLIA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	55	.	20	2	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	10	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	0	.	.	.	2	51
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	10	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	10	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	20	.	.	.	52F
ATRAZINE	10 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	L SUMMER	.	20	.	.	.	52O
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	10	.	.	52R
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	77	.	20	5	13
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	31	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	33	2	22
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	38	47	42	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	100	.	.	.	52L
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	20	.	.	52R
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	80	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	100	.	.	.	52H
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	100	.	.	.	52H
ROUNDUP	3 LB	WATER		10	L SUMMER	.	40	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52W
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52S
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	100	.	.	.	52S
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	.	.	93	.	31
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	83	.	57	.	13
VELPAR GB	10-20#	GRIDBAL			DORMANT	.	0	.	.	.	56
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	100	.	.	.	52L
VELPAR G	1.4 LB	GRANULE		G	L SUMMER	.	80	.	.	.	52S
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	58	.	.	1	19

SNOWBERRY (SYMPHORICARPOS SPP.)

2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	55	61	0	2	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	63	58	0	2	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	56	45	0	3	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	20	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	20	.	.	.	2	51
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	27	15	0	1	22
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	0	.	.	.	23
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G15	L SUMMER	.	7	.	.	.	23
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	54	40	0	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	.	57	39	0	3	13
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
ATRAZINE	4 LB	WATER		S10	L SUMMER	.	10	.	.	.	52O

SNOWBERRY (SYMPHORICARPOS SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
BK 800	1 GAL	WATER		G15	E FOLIAR	.	100	.	75	5	57D
BK 800	1.5 GAL	WATER		G15	E FOLIAR	.	100	.	100	5	57D
BK 875	1 GAL	WATER		G15	E FOLIAR	.	83	.	20	5	57D
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	30	.	.	52R
GARLON 3A	0.75 LB	WATER		G16	L SUMMER	.	59	.	.	.	57C
GARLON 3A	1.5 LB	WATER		G16	L SUMMER	.	90	.	.	.	57C
GARLON 3A	3 LB	WATER		10	L SUMMER	.	0	.	0	0	20
(GARLON 3A +	3 LB					.	.	.	.	.
ROUNDUP)	0.5 LB	WATER		10	L SUMMER	.	27	.	13	0	57A
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	50	2	0	5	13
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	48	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	12	60	0	5	13
GARLON 4	2 LB	DIESEL		G15	E FOLIAR	.	90	.	20	5	57D
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	56	23	0	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	68	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	E FOLIAR	.	64	.	.	.	18
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	33	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	.	0	0	9	2	17
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	0	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	L FOLIAR	.	15	.	.	.	18
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	17	0	0	1	13
GARLON 4	1.5 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	0	.	.	.	18
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	3	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	.	.	1	19
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	28	0	0	2	22
GARLON 4	3 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	0	.	.	.	18
GARLON 4	4.5 LB	WATER	3 QT DIESEL	G16	L SUMMER	.	0	.	.	.	18
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	44	13	0	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G15	E FOLIAR	.	89	.	33	5	57D
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	53	18	0	3	13
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	6	2	22
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	0	0	0	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	10	.	.	52R
ROUNDUP	1 LB	WATER		S8	E FOLIAR	100	.	.	.	OP	53A
ROUNDUP	1 LB	WATER		S7	E FOLIAR	80	.	.	.	OP	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	80	.	.	.	OP	53C
ROUNDUP	2 LB	WATER		10	E FOLIAR	.	92	85	50	5	13
ROUNDUP	2 LB	WATER		G15	E FOLIAR	.	100	.	100	5	57D
ROUNDUP	2 LB	WATER	1% R-11	G15	E FOLIAR	.	100	.	60	5	57D
ROUNDUP	2 LB	WATER	2% R-11	G15	E FOLIAR	.	100	.	100	5	57D
ROUNDUP	2 LB	WATER		S10	E FOLIAR	.	50	.	.	.	52N
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52M
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59A
ROUNDUP	0.75 LB	WATER		7.5	L FOLIAR	.	0	12	0	1	16
ROUNDUP	1.5 LB	WATER		S10	L FOLIAR	95	100	.	.	5	55

SNOWBERRY (SYMPHORICARPOS SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	1.5 LB	WATER	1% R-11	5	L FOLIAR	.	97	91	79	0	17
ROUNDUP	1.5 LB	WATER		7.5	L FOLIAR	.	94	89	60	0	17
ROUNDUP	1.5 LB	WATER		10	L FOLIAR	.	100	100	95	0	17
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	.	75	56	28	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	100	100	100	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	99	100	100	3	16
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	100	.	.	.	.	48
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	.	40	.	.	.	40A
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	80	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	100	100	95	3	16
ROUNDUP	4 LB	WATER		G20	L FOLIAR	100	.	.	.	6	46B
ROUNDUP	1 LB	WATER		10	L SUMMER	.	98	100	83	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	88	87	75	0	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	85	91	47	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	94	98	71	0	13
ROUNDUP	2 LB	WATER		G15	L SUMMER	.	100	.	.	.	23
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	.	70	.	.	0	50A
ROUNDUP	2 LB	WATER		S10	L SUMMER	.	80	.	.	.	52O
ROUNDUP	2 LB	WATER		10	L SUMMER	25	100	.	.	0	50D
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	100	.	.	.	52H
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	100	.	.	.	52H
ROUNDUP	3 LB	WATER		10	L SUMMER	.	50	.	.	.	52T
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	100	.	.	.	52S
(ROUNDUP +	2 LB					.	.	.	.	.
GARLON 4)	1 LB	WATER		10	L SUMMER	.	28	46	0	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	.	51	22	0	.	13
TORDON 101	1 GAL	WATER		G15	E FOLIAR	.	100	.	80	5	57D
TORDON 101	1 GAL	WATER		10	L SUMMER	.	70	47	0	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	53	17	0	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	68	39	0	.	13
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	57	28	8	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	59	0	0	.	13
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	40	.	.	.	52M
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52N
VELPAR L	2 LB	WATER		G15	E FOLIAR	.	73	.	25	5	57D
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52M
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	2 LB	WATER		S10	L SUMMER	.	30	.	.	.	52M
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
WEEDONE 170	1 GAL	WATER		G15	L SUMMER	.	100	.	100	5	57D
WEEDONE 170	3 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	0	.	.	.	23

HUCKLEBERRY (VACCINIUM SPP.)

2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	.	.	10	.	.	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	40	.	.	.	2	51

HUCKLEBERRY (VACCINIUM SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	10	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	30	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	4 LB	WATER		10	L SUMMER	.	58	59	60	3	13
BK 800	1 GAL	WATER		G15	E FOLIAR	.	100	.	100	5	57D
BK 800	1.5 GAL	WATER		G15	E FOLIAR	.	93	.	67	5	57D
BK 875	1 GAL	WATER		G15	E FOLIAR	.	60	.	25	5	57D
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	.	.	60	.	.	52R
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	91	92	75	5	13
GARLON 4	1 GAL	DIESEL		G15	E FOLIAR	.	76	.	0	0	57D
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	94	88	5	13
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	47	.	.	1	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	.	100	100	100	1	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	45	.	.	1	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	52	60	14	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	45	68	11	2	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	.	90	88	75	2	22
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	.	77	73	27	3	20
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	91	59	13	2	13
(GARLON 4 +	2 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	.	100	96	67	3	13
(GARLON 4 +	3 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT MORACT	15	L FOLIAR	.	89	.	.	5	57B
(GARLON 4 +	1 LB					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	L SUMMER	.	21	58	67	2	22
KRENITE	2 LB	WATER		15	L FOLIAR	.	.	0	.	.	52R
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59C
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	23	31	4	1	16
ROUNDUP	1 LB	WATER		10	L FOLIAR	.	23	31	4	1	16
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	70	.	.	.	2	58B
ROUNDUP	2 LB	WATER		10	L FOLIAR	.	.	40	.	.	52R
ROUNDUP	3 LB	WATER		10	L FOLIAR	.	45	16	19	3	16
ROUNDUP	2 LB	WATER		10	L SUMMER	.	25	0	9	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	.	7	7	7	0	13
ROUNDUP	3 LB	WATER		10	L SUMMER	.	50	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	70	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	20	.	.	.	52I
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	20	.	.	.	52I
ROUNDUP	3 LB	WATER		10	L SUMMER	.	30	.	.	.	52T
ROUNDUP	3 LB	WATER		10	L SUMMER	.	80	.	.	.	52U
ROUNDUP	3 LB	WATER		10	L SUMMER	.	60	.	.	.	52V
ROUNDUP	3 LB	WATER		10	L SUMMER	.	60	.	.	.	52W
(ROUNDUP +	4 LB					.	.	.	.	.
GARLON 3A)	0.33 LB	WATER		10	L SUMMER	.	30	.	.	.	52X
(TORDON 101 +	1 GAL					.	.	.	.	.
2,4-D ESTER)	2 LB	WATER		10	E FOLIAR	.	79	79	67	.	13
(TORDON 101 +	1.5 GAL					.	.	.	.	.
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	.	98	96	75	.	13

HUCKLEBERRY (VACCINIUM SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL YR1	%TOP KILL YR2	%TOP KILL YR3	PLANT KILL% TREE	INJURY	REF
(TORDON 101 + 1 GAL 2,4-D ESTER)	2 LB	WATER		10	L SUMMER	.	67	39	33	.	13
(TORDON 101 + 1.5 GAL 2,4-D ESTER)	1 LB	WATER		10	L SUMMER	.	37	27	0	.	13
VELPAR L	4 LB	WATER		S100	L FOLIAR	.	100	.	.	0	41
VELPAR L	2 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	.	0	.	.	1	19

BRACKEN FERN (PTERIDIUM AQUILINUM)

2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	50	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	40	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	50	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	60	.	.	.	52F
ASULOX	.5 LB	WATER		G20	E FOLIAR	80	.	.	.	.	52Y
ASULOX	1 LB	WATER		G20	E FOLIAR	90	.	.	.	.	52Y
ASULOX	1 LB	WATER	.2% SURFACT	GDP	E FOLIAR	.	30	.	.	2	36
ASULOX	2 LB	WATER		G20	E FOLIAR	100	.	.	.	.	52Y
ASULOX	3 LB	WATER	.2% SURFACT	GDP	E FOLIAR	.	81	.	.	.	36
ASULOX	4 LB	WATER		G	E FOLIAR	.	0	0	.	.	38
ASULOX	1 LB	WATER	.2% SURFACT	GDP	L FOLIAR	.	87	.	.	1	36
ASULOX	2 LB	WATER	.2% SURFACT	GDP	L FOLIAR	.	91	.	.	1	36
ASULOX	3 LB	WATER	.2% SURFACT	GDP	L FOLIAR	.	94	.	.	.	36
ASULOX	3 LB	WATER	.2% CHIPCO	10	L FOLIAR	.	.	68	.	1	37
ASULOX	3.3 LB	WATER	.2% CHIPCO	10	L FOLIAR	.	.	91	.	1	37
ASULOX	3.3 LB	WATER		10	L FOLIAR	.	.	95	.	3	37
ASULOX	4 LB	WATER		G	L FOLIAR	.	92	95	.	.	38
ASULOX	6 LB	WATER	.2% CHIPCO	10	L FOLIAR	.	.	69	.	3	37
ASULOX	4 LB	WATER		G	L SUMMER	.	89	93	.	.	38
CASORON W50	4 LBHG	WATER		GDP	E FOLIAR	.	15	.	.	.	36
CASORON W50	8 LBHG	WATER		GDP	E FOLIAR	.	1	.	.	.	36
CASORON W50	4 LBHG	WATER		GDP	L FOLIAR	.	5	.	.	.	36
CASORON W50	8 LBHG	WATER		GDP	L FOLIAR	.	0	.	.	.	36
CASORON G-4	6 LB	GRANULE		G20	FALL	.	80	.	.	.	30
CASORON G-4	8 LB	GRANULE		G20	FALL	.	100	.	.	.	30
DICAMBA	4 LB	WATER		G20	DORMANT	.	60	.	.	.	30
DICAMBA	4 LBHG	WATER		GDP	E FOLIAR	.	95	.	.	.	36
DICAMBA	8 LB	WATER		G20	E FOLIAR	.	90	.	.	.	30
DICAMBA	8 LBHG	WATER		GDP	E FOLIAR	.	98	.	.	.	36
DICAMBA	4 LBHG	WATER		GDP	L FOLIAR	.	72	.	.	.	36
DICAMBA	4 LBHG	WATER	.2% SURFACT	GDP	L FOLIAR	.	37	.	.	.	36
DICAMBA	8 LBHG	WATER		GDP	L FOLIAR	.	98	.	.	.	36
TORDON 2K	2 LB	GRANULE		G	DORMANT	.	80	.	.	.	30
TORDON 2K	3 LB	GRANULE		G	DORMANT	.	100	.	.	.	30
PICLORAM	1 LBHG	WATER		GDP	E FOLIAR	.	20	.	.	.	36
TORDON K	2 LB	WATER		G20	E FOLIAR	.	90	.	.	.	30
PICLORAM	2 LBHG	WATER		GDP	E FOLIAR	.	45	.	.	.	36
TORDON K	3 LB	WATER		G20	E FOLIAR	.	100	.	.	.	30

BRACKEN FERN (PTERIDIUM AQUILINUM)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
TORDON K	4 LB	WATER		G20	E FOLIAR	.	100	.	.	.	30
PICLORAM	1 LBHG	WATER		GDP	L FOLIAR	.	66	.	.	.	36
PICLORAM	2 LBHG	WATER		GDP	L FOLIAR	.	82	.	.	.	36
TORDON 2K	2 LB	GRANULE		G	FALL	.	100	.	.	.	30
TORDON 2K	2 LB	GRANULE		G	FALL	.	94	73	.	.	30
TORDON 2K	2 LB	GRANULE		G	FALL	.	84	.	.	.	30
ROUNDUP	1 LB	WATER		G	L FOLIAR	.	79	63	.	.	38
ROUNDUP	2 LB	WATER		G	L FOLIAR	.	75	77	.	.	38
ROUNDUP	4 LB	WATER		G	L FOLIAR	.	95	97	.	.	38
ROUNDUP	6 LB	WATER		G	L FOLIAR	.	96	97	.	.	38
ROUNDUP	1 LB	WATER		G	L SUMMER	.	79	41	.	.	38
ROUNDUP	2 LB	WATER		G	L SUMMER	.	95	97	.	.	38
ROUNDUP	3 LB	WATER		10	L SUMMER	.	90	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	60	.	.	.	52G
ROUNDUP	3 LB	WATER		10	L SUMMER	.	100	.	.	.	52W
ROUNDUP	4 LB	WATER		G	L SUMMER	.	97	98	.	.	38
ROUNDUP	6 LB	WATER		G	L SUMMER	.	97	98	.	.	38

SWORD FERN (POLYSTICHUM MUNITUM)

CASORON W50	4 LBHG	WATER		GDP	E FOLIAR	.	.	.	20	.	36
CASORON W50	8 LBHG	WATER		GDP	E FOLIAR	.	.	.	60	.	36
CASORON W50	4 LBHG	WATER		GDP	L FOLIAR	.	.	.	30	.	36
CASORON W50	8 LBHG	WATER		GDP	L FOLIAR	.	.	.	50	.	36
DICAMBA	1 LBHG	OIL		GDP	E FOLIAR	.	.	.	10	.	36
DICAMBA	1 LBHG	WATER		GDP	E FOLIAR	.	.	.	0	.	36
DICAMBA	2 LBHG	WATER		GDP	E FOLIAR	.	.	.	40	.	36
DICAMBA	3 LBHG	WATER		GDP	E FOLIAR	.	.	.	90	.	36
DICAMBA	4 LBHG	WATER		GDP	E FOLIAR	.	.	.	80	.	36
DICAMBA	8 LBHG	WATER		GDP	E FOLIAR	.	.	.	80	.	36
DICAMBA	4 LBHG	WATER		GDP	L FOLIAR	.	.	.	30	.	36
DICAMBA	8 LBHG	WATER		GDP	L FOLIAR	.	.	.	90	.	36
PICLORAM	1 LBHG	WATER		GDP	E FOLIAR	.	.	.	0	.	36
PICLORAM	2 LBHG	WATER		GDP	E FOLIAR	.	.	.	40	.	36
PICLORAM	1 LBHG	WATER		GDP	L FOLIAR	.	.	.	0	.	36
PICLORAM	2 LBHG	WATER		GDP	L FOLIAR	.	.	.	20	.	36

BEARGRASS (XEROPHYLLUM TENAX)

ASULOX	5 LB	WATER		G200	E FOLIAR	0	0	.	.	.	4
ATRAZINE	4 LB	WATER		G200	E FOLIAR	17	13	.	.	.	4
ATRAZINE	4 LB	WATER		G20	E FOLIAR	0	.	.	.	.	12
ATRAZINE	5 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52P
ATRAZINE	5 LB	WATER		S10	L FOLIAR	.	10	.	.	.	52Q
(DALAPON + ATRAZINE)	6 LB					.	.	.	.	.
(DALAPON + ATRAZINE)	3 LB	WATER		G200	E FOLIAR	23	30	.	.	.	4
(DALAPON + ATRAZINE)	8 LB					.	.	.	.	.
(DALAPON + ATRAZINE)	4 LB	WATER		G200	E FOLIAR	30	33	.	.	.	4
(DALAPON + ATRAZINE)	8.5 LB					.	.	.	.	.
(DALAPON + ATRAZINE)	4 LB	WATER		G20	E FOLIAR	0	.	.	.	.	12
(DALAPON + ATRAZINE)	10 LB					.	.	.	.	.
(DALAPON + ATRAZINE)	5 LB	WATER		G200	E FOLIAR	30	43	.	.	.	4
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52P

BEARGRASS (XEROPHYLLUM TENAX)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
DALAPON	8 LB	WATER		G200	E FOLIAR	30	27	.	.	.	4
DALAPON	8.5 LB	WATER		G20	E FOLIAR	16	.	.	.	.	12
DALAPON	7.4 LB	WATER		S10	L FOLIAR	.	10	.	.	.	52Q
ROUNDUP	1 LB	WATER		G20	E FOLIAR	0	.	.	.	.	12
ROUNDUP	2 LB	WATER		G20	E FOLIAR	33	.	.	.	.	12
ROUNDUP	2 LB	WATER		G200	E FOLIAR	7	20	.	.	.	4
ROUNDUP	2 LB	WATER	.5%FIRECHEM	G10	E FOLIAR	20	.	.	.	.	47
ROUNDUP	2 LB	WATER	1% SURFACT	S10	E FOLIAR	.	40	.	.	.	52C
ROUNDUP	3 LB	WATER		G20	E FOLIAR	42	.	.	.	.	12
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	60	.	.	.	52C
ROUNDUP	3 LB	WATER	1% SURFACT	S10	E FOLIAR	.	50	.	.	.	52C
ROUNDUP	3 LB	WATER	1% SURFACT	S10	E FOLIAR	.	40	.	.	.	52D
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52P
ROUNDUP	4 LB	WATER		G200	E FOLIAR	30	50	.	.	.	4
ROUNDUP	4 LB	WATER	1% SURFACT	S10	E FOLIAR	.	60	.	.	.	52C
ROUNDUP	2 LB	WATER	1% SURFACT	S10	L FOLIAR	.	30	.	.	.	52C
ROUNDUP	2 LB	WATER		S10	L FOLIAR	13	20	.	.	.	52A
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	20	.	.	.	52P
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52C
ROUNDUP	3 LB	WATER	1% SURFACT	S10	L FOLIAR	.	40	.	.	.	52C
ROUNDUP	4 LB	WATER	1% SURFACT	S10	L FOLIAR	.	50	.	.	.	52C
ROUNDUP	4 LB	WATER		S10	L FOLIAR	40	30	.	.	.	52A
ROUNDUP	6 LB	WATER		S10	L FOLIAR	25	30	.	.	.	52A
ROUNDUP	8 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52A
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	0	.	.	1	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	0	.	.	1	43D
ROUNDUP	3 LB	WATER		10	L SUMMER	.	20	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	30	.	.	.	52I
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	30	.	.	.	52Q
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	40	.	.	.	52I
(ROUNDUP + ATRAZINE)	2 LB	WATER		G20	E FOLIAR	21	.	.	.	.	12
(ROUNDUP + GARLON4)	3 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52C
(ROUNDUP + GARLON4)	0.75 LB	WATER	1% SURFACT	S10	E FOLIAR	.	50	.	.	.	52C
(ROUNDUP + GARLON4)	3 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52D
(ROUNDUP + GARLON4)	0.75 LB	WATER	1% SURFACT	S10	E FOLIAR	.	20	.	.	.	52D
(ROUNDUP + GARLON4)	3 LB	WATER		S10	L FOLIAR	.	20	.	.	.	52C
(ROUNDUP + GARLON 4)	0.75 LB	WATER	1% SURFACT	S10	L FOLIAR	.	50	.	.	.	52C
(ROUNDUP + VELPAR)	1 QT	WATER		G20	E FOLIAR	44	.	.	.	.	12
(ROUNDUP + VELPAR)	2 LB	WATER		G20	E FOLIAR	26	.	.	.	.	12

BEARGRASS (XEROPHYLLUM TENAX)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
VELPAR L	1 LB	WATER		G200	E FOLIAR	33	30	.	.	.	4
VELPAR L	2 LB	WATER		G200	E FOLIAR	50	37	.	.	.	4
VELPAR L	2 LB	WATER		G20	E FOLIAR	37	.	.	.	.	12
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	80	.	.	.	52K
VELPAR L	3 LB	WATER		G200	E FOLIAR	50	50	.	.	.	4
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52C
VELPAR L	3 LB	WATER	1% SURFACT	S10	E FOLIAR	.	50	.	.	.	52C
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	60	.	.	.	52D
VELPAR L	3 LB	WATER	1% SURFACT	S10	E FOLIAR	.	60	.	.	.	52D
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52P
VELPAR L	4 LB	WATER		G200	E FOLIAR	53	47	.	.	.	4
VELPAR L	5 LB	WATER		S10	E FOLIAR	.	50	.	.	.	52C
VELPAR L	5 LB	WATER	1% SURFACT	S10	E FOLIAR	.	60	.	.	.	52C
VELPAR L	5 LB	WATER		S10	E FOLIAR	.	80	.	.	.	52D
VELPAR G	2 LB	GRANULE		S	L FOLIAR	73	70	.	.	.	52A
VELPAR L	2 LB	WATER		S10	L FOLIAR	50	47	.	.	.	52A
VELPAR L	3 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52C
VELPAR L	3 LB	WATER	1% SURFACT	S10	L FOLIAR	.	60	.	.	.	52C
VELPAR L	3 LB	WATER		S10	L FOLIAR	.	50	.	.	.	52Q
VELPAR L	4 LB	WATER		S100	L FOLIAR	.	60	.	.	0	41
VELPAR G	4 LB	GRANULE		S	L FOLIAR	85	93	.	.	.	52A
VELPAR L	4 LB	WATER		S10	L FOLIAR	70	80	.	.	.	52A
VELPAR L	5 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52C
VELPAR L	5 LB	WATER	1% SURFACT	S10	L FOLIAR	.	50	.	.	.	52C
VELPAR G	6 LB	GRANULE		S	L FOLIAR	75	87	.	.	.	52A
VELPAR L	6 LB	WATER		S10	L FOLIAR	82	100	.	.	.	52A
VELPAR G	8 LB	GRANULE		S	L FOLIAR	86	97	.	.	.	52A
VELPAR L	8 LB	WATER		S10	L FOLIAR	82	100	.	.	.	52A

SEDGES (CAREX SPP.)

(2,4-D +	4.2 LB					.	.	.	.	.
DALAPON)	8 LBS	WATER	1PT SURFACT	S100	E FOLIAR	80	.	.	.	OP	61
ASULOX	5 LB	WATER		G200	E FOLIAR	0	0	.	.	.	4
ATRAZINE	10 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52L
ATRAZINE	4 LB	WATER		G200	E FOLIAR	23	0	.	.	.	4
ATRAZINE	4 LB	WATER		G200	E FOLIAR	0	0	.	.	.	4
ATRAZINE	4 LB	WATER		G20	E FOLIAR	21	.	.	.	.	12
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	60	.	.	.	52K
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52M
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
ATRAZINE	5 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52P
ATRAZINE	5 LB	WATER		S10	L FOLIAR	.	20	.	.	.	52Q
ATRAZINE	4 LB	WATER		S10	L SUMMER	.	10	.	.	.	52O
(DALAPON +	6 LB					.	.	.	.	.
ATRAZINE)	3 LB	WATER		G200	E FOLIAR	87	25	.	.	.	4
(DALAPON +	6 LB					.	.	.	.	.
ATRAZINE)	3 LB	WATER		G200	E FOLIAR	83	57	.	.	.	4
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G200	E FOLIAR	85	35	.	.	.	4
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G200	E FOLIAR	100	75	.	.	.	4

SEDGES (CAREX SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
(DALAPON + ATRAZINE)	8.5 LB 4 LB	WATER		G20	E FOLIAR	.	.	.	.	.
(DALAPON + ATRAZINE)	10 LB 5 LB			G200	E FOLIAR	74	.	.	.	.	12
(DALAPON + ATRAZINE)	10 LB 5 LB	WATER		G200	E FOLIAR	90	47	.	.	.	4
(ATRAZINE + DALAPON)	4 LB 8 LB			G200	E FOLIAR	100	93	.	.	.	4
DALAPON	7.4 LB	WATER	.1% NT	10	FALL	.	.	20*	.	.	43I
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	50	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52M
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52N
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52P
DALAPON	8 LB	WATER		G200	E FOLIAR	77	10	.	.	.	4
DALAPON	8 LB	WATER		G200	E FOLIAR	47	37	.	.	.	4
DALAPON	8.5 LB	WATER		G20	E FOLIAR	52	.	.	.	.	12
DALAPON	7.4 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52Q
DALAPON	7.4 LB	WATER		S10	L SUMMER	.	50	.	.	.	52O
ROUNDUP	1 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
ROUNDUP	1 LB	WATER		S7	E FOLIAR	40	.	.	.	OP	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	80	.	.	.	OP	53C
ROUNDUP	2 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
ROUNDUP	2 LB	WATER		G200	E FOLIAR	100	53	.	.	.	4
ROUNDUP	2 LB	WATER		G200	E FOLIAR	83	50	.	.	.	4
ROUNDUP	2 LB	WATER	.5% SURFACT	S25	E FOLIAR	70	.	.	.	OP	54A
ROUNDUP	2 LB	WATER		GDP	E FOLIAR	100	.	.	.	OP	53D
ROUNDUP	2 LB	WATER	.5% DYE	S3	E FOLIAR	60	.	.	.	OP	54B
ROUNDUP	2 LB	WATER		S10	E FOLIAR	.	50	.	.	.	52N
ROUNDUP	3 LB	WATER		G20	E FOLIAR	77	.	.	.	.	12
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	90	.	.	.	52L
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52M
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52P
ROUNDUP	4 LB	WATER		G200	E FOLIAR	100	90	.	.	.	4
ROUNDUP	4 LB	WATER		G200	E FOLIAR	100	63	.	.	.	4
ROUNDUP	4 LB	WATER		S	E FOLIAR	60	.	.	.	OP	59A
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59D
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59E
ROUNDUP	4 LB	WATER		S	E FOLIAR	60	.	.	.	OP	59F
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	80	.	.	.	2	58B
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	100	.	.	.	.	48
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	.	60	.	.	.	40A
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	100	.	.	.	.	40B
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	80	.	.	.	4	44A
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	30	.	.	.	52P
ROUNDUP	4 LB	WATER		S	L FOLIAR	80	.	.	.	OP	59B
ROUNDUP	0.25 LB	WATER		S6.6	L SUMMER	100	.	.	.	.	60
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43D
ROUNDUP	2 LB	WATER		S10	L SUMMER	.	60	.	.	.	52O
ROUNDUP	3 LB	WATER		10	L SUMMER	.	40	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	60	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	70	.	.	.	52H
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	60	.	.	.	52H
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	10	.	.	.	52I
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	0	.	.	.	52I

SEDGES (CAREX SPP.)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	30	.	.	.	52Q
ROUNDUP	3 LB	WATER		10	L SUMMER	.	30	.	.	.	52U
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	20	.	.	.	52S
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	50	.	.	.	52S
(ROUNDUP +	2 LB					.	.	.	.	.
ATRAZINE)	2 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
(ROUNDUP +	1 QT					.	.	.	.	.
VELPAR)	1 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
(ROUNDUP +	2 LB					.	.	.	.	.
VELPAR)	2 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
VELPAR L	1 LB	WATER		G	DORMANT	60	.	.	.	.	28
VELPAR L	1 LB	WATER		G	DORMANT	50	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	87	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	62	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	80	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	93	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	75	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	4 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	4 LB	WATER		G	DORMANT	93	.	.	.	.	28
VELPAR L	1 LB	WATER		G200	E FOLIAR	27	10	.	.	.	4
VELPAR L	1 LB	WATER		G200	E FOLIAR	47	0	.	.	.	4
VELPAR L	2 LB	WATER		G200	E FOLIAR	70	0	.	.	.	4
VELPAR L	2 LB	WATER		G200	E FOLIAR	60	40	.	.	.	4
VELPAR L	2 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	90	.	.	.	52K
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	80	.	.	.	52K
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	10	.	.	.	52M
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	70	.	.	.	52N
VELPAR L	3 LB	WATER		G200	E FOLIAR	77	25	.	.	.	4
VELPAR L	3 LB	WATER		G200	E FOLIAR	73	47	.	.	.	4
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	100	.	.	.	52L
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52M
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	50	.	.	.	52P
VELPAR L	4 LB	WATER		G200	E FOLIAR	87	20	.	.	.	4
VELPAR L	4 LB	WATER		G200	E FOLIAR	83	77	.	.	.	4
VELPAR L	3 LB	WATER		S10	L FOLIAR	.	70	.	.	.	52Q
VELPAR L	4 LB	WATER		S100	L FOLIAR	.	100	.	.	0	41
VELPAR G	1.4 LB	GRANULE		G	L SUMMER	.	80	.	.	.	52S
VELPAR L	2 LB	WATER		S10	L SUMMER	.	70	.	.	.	52O
VELPAR L	1 LB	WATER		G	FALL	12	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	0	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	93	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	50	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	100	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	83	.	.	.	.	28
VELPAR L	4 LB	WATER		G	FALL	100	.	.	.	.	28

GRASSES

2,4-D ESTER	1.5 LB	WATER		G	DORMANT	0	0	.	.	.	11
(2,4-D +	4.2 LB					.	.	.	.	.
DALAPON)	8 LBS	WATER	1PT SURFACT	S100	E FOLIAR	20	.	.	.	OP	61

GRASSES

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ATRAZINE	3 LB	WATER		G100	DORMANT	63	8	.	.	3	10
ATRAZINE	4 LB	WATER		G200	DORMANT	2	.	.	.	.	34
ATRAZINE	4 LB	WATER		G100	DORMANT	85	10	.	.	3	10
ATRAZINE	4 LB	WATER		G	DORMANT	74	37	.	.	.	11
ATRAZINE	1 LB	WATER		G17	E FOLIAR	13	.	.	.	.	29
ATRAZINE	2 LB	WATER		G17	E FOLIAR	38	.	.	.	.	29
ATRAZINE	3 LB	WATER		G17	E FOLIAR	38	.	.	.	.	29
ATRAZINE	4 LB	WATER		G20	E FOLIAR	10	0	.	.	.	2
ATRAZINE	4 LB	WATER		G17	E FOLIAR	34	.	.	.	.	29
ATRAZINE	4 LB	WATER		G200	E FOLIAR	57	.	.	.	0	5
ATRAZINE	4 LB	WATER		G	E FOLIAR	23	.	.	.	0	5
ATRAZINE	4 LB	WATER		S10	E FOLIAR	60	.	.	.	.	52E
ATRAZINE	4 LB	WATER		S10	E FOLIAR	60	.	.	.	.	52J
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52M
(ATRAZINE +	3 LB					.	.	.	.	.
2,4-D)	0.5 LB	WATER		G100	DORMANT	70	5	.	.	1	10
(ATRAZINE +	4 LB					.	.	.	.	.
2,4-D)	1.5 LB	WATER		G	DORMANT	75	20	.	.	.	11
(DALAPON +	4 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G10	DORMANT	40	10	.	.	.	1
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	64	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	94	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	90	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	64	27	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	94	76	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	90	84	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	64	24	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G200	E FOLIAR	87	.	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	70	.	.	.	0	5
(DALAPON +	4 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G10	FALL	25	0	.	.	.	1
(ATRAZINE +	4 LB					.	.	.	.	.
DALAPON)	8 LB	WATER	.1% NT	10	FALL	.	.	20*	.	.	43I
CASORON W50	2 LB	WATER		G100	DORMANT	9	12	.	.	1	10
CASORON W50	4 LB	WATER		G100	DORMANT	14	7	.	.	2	10
CASORON W50	6 LB	WATER		G100	DORMANT	56	24	.	.	3	10
CASORON G-4	2 LB	GRANULE		G	DORMANT	30	12	.	.	2	10
CASORON G-4	4 LB	GRANULE		G	DORMANT	60	50	.	.	2	10
CASORON G-4	6 LB	GRANULE		G	DORMANT	65	52	.	.	3	10
DALAPON	13.6 LB	WATER		G100	DORMANT	80	28	.	.	3	10
DALAPON	5 LB	WATER		G200	DORMANT	78	.	.	.	.	34
DALAPON	6.8 LB	WATER		G100	DORMANT	69	21	.	.	1	10
DALAPON	12 LB	WATER		G	E FOLIAR	53	.	.	.	.	26
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	28	9	.	.	0	5
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	38	19	.	.	0	5

GRASSES

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	14	22	.	.	0	5
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	53	24	.	.	0	5
DALAPON	4 LB	WATER		G	E FOLIAR	52	.	.	.	.	26
DALAPON	4 LB	WATER		G	E FOLIAR	28	.	.	.	.	3
DALAPON	4 LB	WATER		G	E FOLIAR	38	.	.	.	.	3
DALAPON	4 LB	WATER		G	E FOLIAR	53	.	.	.	.	3
DALAPON	4 LB	WATER		G	E FOLIAR	14	.	.	.	.	3
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
DALAPON	8 LB	WATER		G	E FOLIAR	43	.	.	.	.	26
DALAPON	8 LB	WATER		G	E FOLIAR	47	.	.	.	.	3
DALAPON	8 LB	WATER		G	E FOLIAR	62	.	.	.	.	3
DALAPON	8 LB	WATER		G	E FOLIAR	32	.	.	.	.	3
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	47	28	.	.	0	5
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	62	27	.	.	0	5
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	32	32	.	.	0	5
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	62	24	.	.	0	5
DALAPON	8 LB	WATER		G200	E FOLIAR	50	.	.	.	0	5
DALAPON	8 LB	WATER		G	E FOLIAR	47	.	.	.	0	5
DALAPON	12 LB	WATER		G	L FOLIAR	18	.	.	.	.	26
DALAPON	4 LB	WATER		G	L FOLIAR	22	.	.	.	.	26
DALAPON	8 LB	WATER		G	L FOLIAR	20	.	.	.	.	26
ROUNDUP	2 LB	WATER		G48	DORMANT	92	.	.	.	.	24
ROUNDUP	1 LB	WATER		S8	E FOLIAR	100	.	.	.	OP	53A
ROUNDUP	1 LB	WATER		S7	E FOLIAR	100	.	.	.	OP	53B
ROUNDUP	2 LB	WATER	.5% SURFACT	S25	E FOLIAR	80	.	.	.	OP	54A
ROUNDUP	2 LB	WATER	.5% DYE	S3	E FOLIAR	80	.	.	.	OP	54B
ROUNDUP	2 LB	WATER		S10	E FOLIAR	80	.	.	.	OP	52E
ROUNDUP	2 LB	WATER		S10	E FOLIAR	40	.	.	.	.	52J
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52M
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	50	.	.	.	OP	45
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER		G48	L FOLIAR	94	.	.	.	.	24
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	100	.	.	.	.	48
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	.	60	.	.	.	40A
ROUNDUP	2 LB	WATER	1% SURFACT	S10	L FOLIAR	100	.	.	.	.	49
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	100	.	.	.	.	40B
ROUNDUP	4 LB	WATER		G20	L FOLIAR	100	.	.	.	6	46B
ROUNDUP	1 LB	WATER		G15	L SUMMER	.	100	.	.	0	23
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	2	43B
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43D
ROUNDUP	3 LB	WATER	.6% R-11	10	L SUMMER	.	40	.	.	1	43J
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	60	.	.	.	52H
(ROUNDUP +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	5%R-11,TV	10	L SUMMER	.	20	.	.	6	43A
VELPAR L	1 LB	WATER		G	DORMANT	50	.	.	.	.	28
VELPAR L	1 LB	WATER		G	DORMANT	64	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	73	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	83	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	91	.	.	.	.	28
VELPAR L	2 LB	WATER		G20	DORMANT	75	50	.	.	.	1
VELPAR L	2 LB	WATER	.1% NT	10	DORMANT	.	.	40	.	.	43H

GRASSES

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
VELPAR L	4 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	1 LB	WATER		G17	E FOLIAR	50	.	.	.	.	29
VELPAR L	2 LB	WATER		G200	E FOLIAR	95	.	.	.	.	6
VELPAR L	2 LB	WATER		G17	E FOLIAR	83	.	.	.	.	29
VELPAR L	2 LB	WATER		S10	E FOLIAR	40	.	.	.	.	52E
VELPAR L	2 LB	WATER		S10	E FOLIAR	80	.	.	.	.	52J
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	20	.	.	.	52M
VELPAR L	3 LB	WATER		G17	E FOLIAR	91	.	.	.	.	29
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52M
VELPAR L	4 LB	WATER		G17	E FOLIAR	94	.	.	.	.	29
VELPAR L	2 LB	WATER	2.2 %MORACT	10	L SUMMER	.	80	.	.	1	58A
VELPAR L	1 LB	WATER		G	FALL	17	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	9	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	33	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	80	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	45	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	83	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	100	.	.	.	.	28
VELPAR L	4 LB	WATER		G	FALL	100	.	.	.	.	28
(VELPAR +	2 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	.	.	20	.	4	43E
(VELPAR +	1 LB					.	.	.	.	.
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	.	.	20	.	4	43G
WEEDONE 170	3 QT	WATER	3 QT DIESEL	G15	L SUMMER	.	100	.	.	.	23

PINEGRASS (CALAMAGROSTIS RUBESCENS)

(2,4-D +	4.2 LB					.	.	.	.	.
DALAPON)	8 LBS	WATER	1PT SURFACT	S100	E FOLIAR	80	.	.	.	OP	61
ATRAZINE	10 LB	WATER		S10	E FOLIAR	.	30	.	.	.	52L
ATRAZINE	4 LB	WATER		G20	E FOLIAR	44	.	.	.	.	12
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	60	.	.	.	52K
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
ATRAZINE	4 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52N
ATRAZINE	5 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52P
ATRAZINE	4 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
ATRAZINE	5 LB	WATER		S10	L FOLIAR	.	20	.	.	.	52Q
ATRAZINE	4 LB	WATER		G20	L SUMMER	0	.	.	.	.	12
ATRAZINE	4 LB	WATER		S10	L SUMMER	.	10	.	.	.	52O
(DALAPON +	8.5 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G20	E FOLIAR	100	.	.	.	.	12
(DALAPON +	8.5 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
(DALAPON +	8.5 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G20	L SUMMER	0	.	.	.	.	12
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52L
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52M
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52N
DALAPON	7.4 LB	WATER		S10	E FOLIAR	.	20	.	.	.	52P
DALAPON	8.5 LB	WATER		G20	E FOLIAR	97	.	.	.	.	12
DALAPON	7.4 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52Q
DALAPON	8.5 LB	WATER		G20	L FOLIAR	36	.	.	.	.	12

PINEGRASS (CALAMAGROSTIS RUBESCENS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
DALAPON	7.4 LB	WATER		S10	L SUMMER	.	50	.	.	.	52O
DALAPON	8.5 LB	WATER		G20	L SUMMER	0	.	.	.	.	12
GARLON 4	2 LB	WATER	3%NT, MORACT	10	L FOLIAR	0	.	.	.	2	44L
GARLON 4	4 LB	WATER	5%NT, MORACT	10	L FOLIAR	0	.	.	.	5	44B
ROUNDUP	1 LB	WATER		G20	E FOLIAR	93	.	.	.	.	12
ROUNDUP	1 LB	WATER		S7	E FOLIAR	80	.	.	.	OP	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	100	.	.	.	OP	53C
ROUNDUP	2 LB	WATER	.5% SURFACT	S25	E FOLIAR	80	.	.	.	OP	54A
ROUNDUP	2 LB	WATER		GDP	E FOLIAR	100	.	.	.	OP	53D
ROUNDUP	2 LB	WATER	.5% DYE	S3	E FOLIAR	80	.	.	.	OP	54B
ROUNDUP	2 LB	WATER	.5%FIRECHEM	G10	E FOLIAR	100	.	.	.	.	47
ROUNDUP	2 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52N
ROUNDUP	3 LB	WATER		G20	E FOLIAR	99	.	.	.	.	12
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	90	.	.	.	52L
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	10	.	.	.	52M
ROUNDUP	3 LB	WATER		S10	E FOLIAR	.	0	.	.	.	52P
ROUNDUP	4 LB	WATER		S	E FOLIAR	60	.	.	.	OP	59A
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59C
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59D
ROUNDUP	4 LB	WATER		S	E FOLIAR	80	.	.	.	OP	59E
ROUNDUP	4 LB	WATER		S	E FOLIAR	60	.	.	.	OP	59F
ROUNDUP	0.3 LB	WATER		S1.5	L FOLIAR	80	.	.	.	OP	45
ROUNDUP	1 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	100	.	.	.	2	58B
ROUNDUP	2 LB	WATER	1% R-11, NT	10.7	L FOLIAR	60	.	.	.	2	44F
ROUNDUP	2 LB	WATER	<1% NT	10.6	L FOLIAR	60	.	.	.	1	44G
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	80	.	.	.	0	44H
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	80	.	.	.	0	44I
ROUNDUP	2 LB	WATER	1%NT, MORACT	10.5	L FOLIAR	60	.	.	.	2	44J
ROUNDUP	2 LB	WATER	3%	S	L FOLIAR	100	.	.	.	.	48
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	.	60	.	.	.	40A
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	100	.	.	.	.	40B
ROUNDUP	2 LB	WATER	1% SURFACT	S10	L FOLIAR	100	.	.	.	.	49
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52P
ROUNDUP	3 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
ROUNDUP	4 LB	WATER		S	L FOLIAR	80	.	.	.	OP	59B
ROUNDUP	0.25 LB	WATER		S6.6	L SUMMER	100	.	.	.	.	60
ROUNDUP	1 LB	WATER		G20	L SUMMER	0	.	.	.	.	12
ROUNDUP	2 LB	WATER		S10	L SUMMER	.	50	.	.	.	52O
ROUNDUP	3 LB	WATER		G20	L SUMMER	65	.	.	.	.	12
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	60	.	.	.	52S
ROUNDUP	3 LB	WATER		S10	L FOLIAR	.	40	.	.	.	52Q
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	60	.	.	.	52S
(ROUNDUP +	2 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G20	E FOLIAR	90	.	.	.	.	12
(ROUNDUP +	2 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
(ROUNDUP +	2 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G20	L SUMMER	0	.	.	.	.	12
(ROUNDUP +	2 LB					.	.	.	.	.
VELPAR)	2 LB	WATER		G20	E FOLIAR	85	.	.	.	.	12
(ROUNDUP +	2 LB					.	.	.	.	.
VELPAR)	2 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
(ROUNDUP +	2 LB					.	.	.	.	.
VELPAR)	2 LB	WATER		G20	L SUMMER	0	.	.	.	.	12

PINEGRASS (CALAMAGROSTIS RUBESCENS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP			PLANT KILL%	TREE INJURY	REF
						KILL YR1	KILL YR2	KILL YR3			
VELPAR L	1 LB	WATER		G	DORMANT	68	.	.	.	.	28
VELPAR L	1 LB	WATER		G	DORMANT	69	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	91	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	79	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	84	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	97	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	95	.	.	.	.	28
VELPAR L	4 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	2 LB	WATER		G20	E FOLIAR	66	.	.	.	.	12
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	80	.	.	.	52K
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	80	.	.	.	52K
VELPAR G	2 LB	GRANULE		S	E FOLIAR	.	20	.	.	.	52M
VELPAR L	2 LB	WATER		S10	E FOLIAR	.	70	.	.	.	52N
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	100	.	.	.	52L
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52M
VELPAR L	3 LB	WATER		S10	E FOLIAR	.	40	.	.	.	52P
VELPAR L	2 LB	WATER		G20	L FOLIAR	0	.	.	.	.	12
VELPAR L	3 LB	WATER		S10	L FOLIAR	.	70	.	.	.	52Q
VELPAR L	4 LB	WATER		S100	L FOLIAR	.	100	.	.	0	41
VELPAR G	1.4 LB	GRANULE		G	L SUMMER	.	90	.	.	.	52S
VELPAR L	2 LB	WATER		G20	L SUMMER	0	.	.	.	.	12
VELPAR L	2 LB	WATER		S10	L SUMMER	.	70	.	.	.	52O
VELPAR L	1 LB	WATER		G	FALL	10	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	23	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	58	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	100	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	54	.	.	.	.	28
VELPAR G	1 LB	GRANULE		S	FALL	.	20	.	.	.	52B
VELPAR L	2 LB	WATER		G	FALL	92	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	100	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	95	.	.	.	.	28
VELPAR G	2 LB	GRANULE		S	FALL	.	40	.	.	.	52B
VELPAR G	3 LB	GRANULE		S	FALL	.	70	.	.	.	52B
VELPAR L	4 LB	WATER		G	FALL	100	.	.	.	.	28
VELPAR G	4 LB	GRANULE		S	FALL	.	80	.	.	.	52B
VELPAR G	5 LB	GRANULE		S	FALL	.	80	.	.	.	52B

FORBS

2,4-D ESTER	1.5 LB	WATER		G	DORMANT	3	0	.	.	.	11
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G15	L FOLIAR	.	82	.	.	2	57D
2,4-D ESTER	2 LB	WATER		G15	L FOLIAR	.	85	.	.	1	57D
2,4-D ESTER	3 LB	WATER		G15	L FOLIAR	.	86	.	.	1	57D
ATRAZINE	3 LB	WATER		G100	DORMANT	14	2	.	.	3	10
ATRAZINE	4 LB	WATER		G100	DORMANT	34	2	.	.	3	10
ATRAZINE	4 LB	WATER		G	DORMANT	7	0	.	.	0	11
ATRAZINE	1 LB	WATER		G17	E FOLIAR	5	.	.	.	.	29
ATRAZINE	2 LB	WATER		G17	E FOLIAR	77	.	.	.	.	29
ATRAZINE	3 LB	WATER		G17	E FOLIAR	94	.	.	.	.	29
ATRAZINE	4 LB	WATER		G20	E FOLIAR	20	0	.	.	.	2
ATRAZINE	4 LB	WATER		G17	E FOLIAR	95	.	.	.	.	29
ATRAZINE	4 LB	WATER		G200	E FOLIAR	37	.	.	.	0	5

FORBS

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
ATRAZINE	4 LB	WATER		G	E FOLIAR	33	.	.	.	0	5
(ATRAZINE +	3 LB					.	.	.	.	.
2,4-D)	0.5 LB	WATER		G100	DORMANT	27	13	.	.	1	10
(ATRAZINE +	4 LB					.	.	.	.	.
2,4-D)	1.5 LB	WATER		G	DORMANT	69	0	.	.	.	11
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	29	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	86	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	20	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	79	.	.	.	.	3
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G200	E FOLIAR	70	.	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER		G	E FOLIAR	30	.	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	86	23	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	29	6	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	79	56	.	.	0	5
(DALAPON +	8 LB					.	.	.	.	.
ATRAZINE)	4 LB	WATER	.5% SURFACT	S	E FOLIAR	20	10	.	.	0	5
CASORON W50	2 LB	WATER		G100	DORMANT	6	4	.	.	1	10
CASORON W50	4 LB	WATER		G100	DORMANT	3	4	.	.	2	10
CASORON W50	6 LB	WATER		G100	DORMANT	27	9	.	.	3	10
CASORON G-4	2 LB	GRANULE		G	DORMANT	12	15	.	.	2	10
CASORON G-4	4 LB	GRANULE		G	DORMANT	28	22	.	.	2	10
CASORON G-4	6 LB	GRANULE		G	DORMANT	40	15	.	.	3	10
DALAPON	13.6 LB	WATER		G100	DORMANT	8	7	.	.	3	10
DALAPON	6.8 LB	WATER		G100	DORMANT	11	28	.	.	1	10
DALAPON	12 LB	WATER		G	E FOLIAR	0	.	.	.	.	26
DALAPON	4 LB	WATER		G	E FOLIAR	0	.	.	.	.	26
DALAPON	4 LB	WATER		G	E FOLIAR	1	.	.	.	.	3
DALAPON	4 LB	WATER		G	E FOLIAR	10	.	.	.	.	3
DALAPON	4 LB	WATER		G	E FOLIAR	4	.	.	.	.	3
DALAPON	4 LB	WATER		G	E FOLIAR	9	.	.	.	.	3
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	1	0	.	.	0	5
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	10	0	.	.	0	5
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	9	1	.	.	0	5
DALAPON	4 LB	WATER	.5% SURFACT	S	E FOLIAR	4	0	.	.	0	5
DALAPON	8 LB	WATER		G	E FOLIAR	0	.	.	.	.	26
DALAPON	8 LB	WATER		G	E FOLIAR	4	.	.	.	.	3
DALAPON	8 LB	WATER		G	E FOLIAR	11	.	.	.	.	3
DALAPON	8 LB	WATER		G	E FOLIAR	15	.	.	.	.	3
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	11	0	.	.	0	5
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	15	0	.	.	0	5
DALAPON	8 LB	WATER	.5% SURFACT	S	E FOLIAR	4	0	.	.	0	5
DALAPON	8 LB	WATER		G200	E FOLIAR	10	.	.	.	0	5
DALAPON	12 LB	WATER		G	L FOLIAR	0	.	.	.	.	26

FORBS

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	%TOP KILL	%TOP KILL	%TOP KILL	PLANT KILL%	TREE INJURY	REF
						YR1	YR2	YR3			
DALAPON	4 LB	WATER		G	L FOLIAR	0	.	.	.	.	26
DALAPON	8 LB	WATER		G	L FOLIAR	0	.	.	.	.	26
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	L FOLIAR	.	100	.	.	2	57D
ROUNDUP	2 LB	WATER		G48	DORMANT	0	.	.	.	.	24
ROUNDUP	1 LB	WATER		S7	E FOLIAR	20	.	.	.	OP	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	100	.	.	.	OP	53C
ROUNDUP	2 LB	WATER		G48	L FOLIAR	84	.	.	.	.	24
ROUNDUP	2 LB	WATER		G15	L FOLIAR	.	76	.	.	1	57D
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	.	100	.	.	.	40A
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	100	.	.	.	.	40B
ROUNDUP	2 LB	WATER	1% SURFACT	S10	L FOLIAR	100	.	.	.	.	49
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	10	.	.	.	52I
ROUNDUP	3 LB	WATER		G10	L SUMMER	.	20	.	.	.	52I
TORDON 101	1 GAL	WATER		G15	L FOLIAR	.	91	.	.	5	57D
VELPAR L	1 LB	WATER		G	DORMANT	0	.	.	.	.	28
VELPAR L	1 LB	WATER		G	DORMANT	12	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	0	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	DORMANT	37	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	43	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	0	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	25	.	.	.	.	28
VELPAR L	2 LB	WATER		G	DORMANT	82	.	.	.	.	28
VELPAR L	4 LB	WATER		G	DORMANT	100	.	.	.	.	28
VELPAR L	1 LB	WATER		G17	E FOLIAR	18	.	.	.	.	29
VELPAR L	2 LB	WATER		G200	E FOLIAR	85	.	.	.	.	6
VELPAR L	2 LB	WATER		G17	E FOLIAR	82	.	.	.	.	29
VELPAR L	3 LB	WATER		G17	E FOLIAR	91	.	.	.	.	29
VELPAR L	4 LB	WATER		G17	E FOLIAR	98	.	.	.	.	29
VELPAR L	4 LB	WATER		G15	L FOLIAR	.	70	.	.	1	57D
VELPAR L	4 LB	WATER		G15	L FOLIAR	.	73	.	.	1	57D
VELPAR L	4 LB	WATER		G15	L FOLIAR	.	83	.	.	1	57D
VELPAR L	1 LB	WATER		G	FALL	0	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	37	.	.	.	.	28
VELPAR L	1 LB	WATER		G	FALL	36	.	.	.	.	28
VELPAR L	1.5 LB	WATER		G	FALL	0	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	43	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	0	.	.	.	.	28
VELPAR L	2 LB	WATER		G	FALL	64	.	.	.	.	28
VELPAR L	4 LB	WATER		G	FALL	100	.	.	.	.	28
VELPAR L	4 LB	WATER		G	FALL	69	.	.	.	.	28

THISTLE (CIRSIIUM SPP.)

2,4-D ESTER	2 LB	WATER		S10	L SUMMER	.	90	.	.	.	52F
2,4-D ESTER	2 LB	WATER		G10	L SUMMER	.	90	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	S10	L SUMMER	.	70	.	.	.	52F
2,4-D ESTER	2 LB	WATER	2 QT DIESEL	G10	L SUMMER	.	90	.	.	.	52F
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G15	L SUMMER	100	.	.	.	.	23
ROUNDUP	3 LB	WATER		10	L SUMMER	.	70	.	.	.	52G
ROUNDUP	3 LB	WATER		S10	L SUMMER	.	90	.	.	.	52G
WEEDONE 170	6 QT	WATER	3 QT DIESEL	G15	L SUMMER	100	.	.	.	.	23

WHITE PINE (PINUS MONTICOLA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	0	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	3	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G15	E FOLIAR	1	23
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	1	23
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	6	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	6	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	6	32
GARLON 3A	3 LB	WATER		10	L SUMMER	0	20
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	3	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	6	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L FOLIAR	1	17
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	0	20
GARLON 4	2 LB	WATER	3 QT DIESEL	G15	L SUMMER	1	23
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	3	20
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	3	20
(GARLON 4 +	1 LB						
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	3	13
ROUNDUP	0.75 QT	WATER		7.5	L FOLIAR	0	16
ROUNDUP	1 LB	WATER		10	L FOLIAR	0	16
ROUNDUP	1.5 QT	WATER	1% R-11	5	L FOLIAR	0	17
ROUNDUP	1.5 QT	WATER		7.5	L FOLIAR	0	17
ROUNDUP	1.5 QT	WATER		10	L FOLIAR	0	17
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	0	44D
ROUNDUP	2 LB	WATER		7.5	L FOLIAR	0	17
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	17
ROUNDUP	3 LB	WATER		10	L FOLIAR	0	16
ROUNDUP	1 LB	WATER		G15	L SUMMER	0	23
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	2	43B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62A
ROUNDUP	2 LB	WATER		10	L SUMMER	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	0	13
ROUNDUP	2 LB	WATER		G15	L SUMMER	0	23
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	0	42
ROUNDUP	2 LB	WATER		S10	FALL	5	52Z
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	6	32
TORDON 101	1 GAL	WATER		10	L SUMMER	0	13
(TORDON 101 +	1.5 GAL						
2,4-D ESTER)	1 LB	WATER		10	E FOLIAR	6	13
(TORDON 101 +	1 GAL	WATER					
2,4-D ESTER)	2 LB	WATER		10	L SUMMER	2	13
(TORDON 101 +	1.5 GAL	WATER					
2,4-D ESTER)	1 LB	WATER		10	L SUMMER	4	13
VELPAR L	2 LB	WATER	.1% NT	10	DORMANT	0	43H
VELPAR L	1 LB	WATER		S10	E FOLIAR	5	52Z
VELPAR L	2 LB	WATER		S10	E FOLIAR	6	52Z

WHITE PINE (PINUS MONTICOLA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
VELPAR L	2 LB	WATER		S10	L FOLIAR	6	52Z
VELPAR G	2 LB	GRANULE		S	E FOLIAR	6	52Z
VELPAR L	3 LB	WATER		S10	E FOLIAR	6	52Z
VELPAR L	1 LB	WATER		S10	L FOLIAR	5	52Z
VELPAR G	2 LB	GRANULE		S	L FOLIAR	6	52Z
VELPAR L	3 LB	WATER		S10	L FOLIAR	5	52Z
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	0	19
VELPAR G	2 LB	GRANULE		S	FALL	0	52B
VELPAR L	2 LB	WATER		S10	FALL	6	52Z
VELPAR G	2 LB	GRANULE		S	FALL	5	52Z
VELPAR G	4 LB	GRANULE		S	FALL	0	52B

WESTERN LARCH (WESTERN LARCH)

2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	1	52R
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	1	13
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	1	52R
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	6	13
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	4	44B
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	5	19
ROUNDUP	2 LB	WATER		10	E FOLIAR	6	13
ROUNDUP	4 LB	WATER		S	E FOLIAR	OP	59D
ROUNDUP	4 LB	WATER		S	E FOLIAR	OP	59F
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	4	44D
ROUNDUP	2 LB	WATER		10	L FOLIAR	2	52R
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	4	44A
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	4	44C
ROUNDUP	4 LB	WATER		S	L FOLIAR	OP	59B
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	4	50A
ROUNDUP	2 LB	WATER		10	L SUMMER	6	50C
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	0	42
ROUNDUP	2 LB	WATER		S10	FALL	5	52Z
(ROUNDUP +	2 LB						
2,4-D,2,4-DP)	2 LB	WATER	5%R-11,TV	10	L SUMMER	6	43A
TORDON 101	1 GAL	WATER		10	E FOLIAR	3	13
VELPAR L	1 LB	WATER		S10	E FOLIAR	6	52Z
VELPAR L	2 LB	WATER		S10	E FOLIAR	6	52Z
VELPAR G	2 LB	GRANULE		S1	E FOLIAR	6	52Z
VELPAR L	3 LB	WATER		S10	E FOLIAR	6	52Z
VELPAR L	1 LB	WATER		S10	L FOLIAR	6	52Z
VELPAR L	2 LB	WATER		S10	L FOLIAR	6	52Z
VELPAR G	2 LB	GRANULE		S	L FOLIAR	6	52Z
VELPAR L	3 LB	WATER		S10	L FOLIAR	6	52Z
VELPAR L	2 LB	WATER		S10	FALL	6	52Z
VELPAR G	2 LB	GRANULE		S	FALL	6	52Z
(VELPAR +	2 LB						
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	4	43E
(VELPAR +	1 LB						
2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	4	43G

DOUGLAS FIR (PSEUDOTSUGA MENZIESII)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
2,4-D ESTER	3 LB	OIL		10	DORMANT	1	39
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	0	13
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	G10	L SUMMER	1	57E
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	1	39
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	5	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	0	52R
2,4-D ESTER	4 LB	WATER	2% MORACT	15	L FOLIAR	2	51
2,4-D ESTER	2 LB	WATER		10	L SUMMER	1	39
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	3	13
(2,4-D +	2 LB						
2,4-DP)	2 LB	WATER	8% MORACT, TV	10	L SUMMER	4	43F
(2,4-D +	4.2 LB						
DALAPON)	8 LBS	WATER	1PT SURFACT	S100	E FOLIAR	OP	61
ASULOX	2 LB	WATER		GDP	E FOLIAR	3	36
ASULOX	2 LB	WATER		GDP	L FOLIAR	1	36
ASULOX	3 LB	WATER	.2% CHIPCO	10	L FOLIAR	1	37
ASULOX	3.3 LB	WATER	.2% CHIPCO	10	L FOLIAR	1	37
ASULOX	3.3 LB	WATER		10	L FOLIAR	3	37
ASULOX	2 LB	WATER		GDP	L SUMMER	1	36
ATRAZINE	3 LB	WATER		G100	DORMANT	3	10
ATRAZINE	4 LB	WATER		G100	DORMANT	3	10
(ATRAZINE +	3 LB						
2,4-D)	0.5 LB	WATER		G100	DORMANT	1	10
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	3	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
CASORON W50	2 LB	WATER		G100	DORMANT	1	10
CASORON W50	4 LB	WATER		G100	DORMANT	2	10
CASORON W50	6 LB	WATER		G100	DORMANT	3	10
CASORON G 4	2 LB	GRANULE		G	DORMANT	2	10
CASORON G 4	4 LB	GRANULE		G	DORMANT	2	10
CASORON G 4	6 LB	GRANULE		G	DORMANT	2	10
DALAPON	13.6 LB	WATER		G100	DORMANT	3	10
DALAPON	6.8 LB	WATER		G100	DORMANT	1	10
DICAMBA	2 LB	WATER		GDP	L FOLIAR	3	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	5	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	0	52R
GARLON 3A	3 LB	WATER		10	L SUMMER	0	20
GARLON 4	1 LB	OIL		10	DORMANT	0	39
GARLON 4	1 LB	OIL		10	DORMANT	1	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	1	39
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	1	13
GARLON 4	1.5 LB	WATER		10	E FOLIAR	1	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	6	13
GARLON 4	2 LB	WATER	1% NT, MORACT	10.6	L FOLIAR	2	44K
GARLON 4	2 LB	WATER	3% NT, MORACT	10	L FOLIAR	2	44L
GARLON 4	4 LB	WATER	5% NT, MORACT	10	L FOLIAR	4	44B
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	1	13
GARLON 4	1.5 LB	WATER		10	L SUMMER	1	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	1	20

DOUGLAS FIR (PSEUDOTSUGA MENZIESII)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
GARLON 4	2 LB	WATER	3 QT DIESEL	G10	L SUMMER	4	57E
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	0	20
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	2	20
(GARLON 4 +	1 LB						
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	G10	L SUMMER	3	57E
(GARLON 4 +	1 LB						
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G10	L SUMMER	2	57E
(GARLON 4 +	1.5 LB						
2,4-D ESTER)	1.5 LB	WATER	3 QT DIESEL	G10	L SUMMER	3	57E
(GARLON 4 +	2 LB						
2,4-D ESTER)	1 LB	WATER	3 QT DIESEL	G10	L SUMMER	3	57E
(GARLON 4 +	1 LB						
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	1	13
(GARLON 4 +	2 LB						
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	5	13
ROUNDUP	2 LB	WATER	.5% SURFACT	S25	E FOLIAR	OP	54A
ROUNDUP	2 LB	WATER	.5% DYE	S3	E FOLIAR	OP	54B
ROUNDUP	2 LB	WATER		S10	E FOLIAR	5	52Z
ROUNDUP	2 LB	WATER		10	E FOLIAR	5	13
ROUNDUP	3 LB	WATER		S10	E FOLIAR	5	52Z
ROUNDUP	4 LB	WATER		S	E FOLIAR	OP	59D
ROUNDUP	4 LB	WATER		S	E FOLIAR	OP	59E
ROUNDUP	4 LB	WATER		S	E FOLIAR	OP	59F
ROUNDUP	0.75 QT	WATER		7.5	L FOLIAR	1	16
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	4	58B
ROUNDUP	1 LB	WATER		10	L FOLIAR	0	16
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	2	44D
ROUNDUP	2 LB	WATER	3% NT,DYE	10.6	L FOLIAR	2	44E
ROUNDUP	2 LB	WATER	1% R-11,NT	10.7	L FOLIAR	2	44F
ROUNDUP	2 LB	WATER	<1% NT	10.6	L FOLIAR	0	44G
ROUNDUP	2 LB	WATER	1%NT,MORACT	10.5	L FOLIAR	2	44J
ROUNDUP	2 LB	WATER		S10	L FOLIAR	3	52Z
ROUNDUP	2 LB	WATER		10	L FOLIAR	1	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	52R
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	4	44C
ROUNDUP	3 LB	WATER		S10	L FOLIAR	4	52Z
ROUNDUP	3 LB	WATER		10	L FOLIAR	1	16
ROUNDUP	4 LB	WATER		S	L FOLIAR	OP	59B
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	G20	L SUMMER	0	43B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62A
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62C
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62D
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62E
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62F
ROUNDUP	2 LB	WATER		S10	L SUMMER	0	52Z
ROUNDUP	2 LB	WATER		10	L SUMMER	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	0	13
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50B
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50C
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	0	42
ROUNDUP	3 LB	WATER		S10	L SUMMER	1	52Z

DOUGLAS FIR (PSEUDOTSUGA MENZIESII)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
ROUNDUP	2 LB	WATER		S10	FALL	0	52Z
(ROUNDUP + 2,4-D,2,4-DP)	2 LB	WATER	5% R-11	10	L SUMMER	4	43A
(ROUNDUP + GARLON 4)	2 LB	WATER		10	L SUMMER	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	3	13
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	5	32
TORDON 101	1 GAL	WATER		10	L SUMMER	1	13
(TORDON 101 + 2,4-D ESTER)	1 GAL	WATER		10	E FOLIAR	5	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL	WATER		10	E FOLIAR	6	13
(TORDON 101 + 2,4-D ESTER)	1 LB	WATER		10	L SUMMER	3	13
(TORDON 101 + 2,4-D ESTER)	2 LB	WATER		10	L SUMMER	3	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL	WATER		10	L SUMMER	3	13
VELPAR L	2 LB	WATER	.1% NT	10	DORMANT	0	43H
VELPAR L	1 LB	WATER		S10	E FOLIAR	2	52Z
VELPAR L	2 LB	WATER		S10	E FOLIAR	3	52Z
VELPAR G	2 LB	GRANULE		S	E FOLIAR	3	52Z
VELPAR L	3 LB	WATER		S10	E FOLIAR	4	52Z
VELPAR L	1 LB	WATER		S10	L FOLIAR	0	52Z
VELPAR L	2 LB	WATER		S10	L FOLIAR	0	52Z
VELPAR G	2 LB	GRANULE		S	L FOLIAR	1	52Z
VELPAR L	3 LB	WATER		S10	L FOLIAR	1	52Z
VELPAR L	2 LB	WATER	2.2 %MORACT	10	L SUMMER	0	58A
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	0	19
VELPAR G	2 LB	GRANULE		S	FALL	0	52B
VELPAR L	2 LB	WATER		S10	FALL	1	52Z
VELPAR G	2 LB	GRANULE		S	FALL	0	52Z
VELPAR G	4 LB	GRANULE		S	FALL	0	52B
(VELPAR + 2,4-D,2,4-DP)	2 LB	WATER	8%MORACT,TV	10	L SUMMER	4	43E
(VELPAR + 2,4-D,2,4-DP)	1 LB	WATER	8%MORACT,TV	10	L SUMMER	4	43G

GRAND FIR (ABIES GRANDIS)

2,4-D ESTER	3 LB	OIL		10	DORMANT	1	39
2,4-D ESTER	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	0	13
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	1	39
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	0	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	E FOLIAR	5	13
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	0	52R
2,4-D ESTER	2 LB	WATER		10	L SUMMER	1	39
2,4-D ESTER	3 LB	WATER	3 QT DIESEL	10	L SUMMER	3	13
2,4-D ESTER	4 LB	WATER	3 QT DIESEL	10	L SUMMER	3	13
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	6	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	6	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	6	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	0	52R

GRAND FIR (ABIES GRANDIS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
GARLON 3A	3 LB	WATER		10	L SUMMER	0	20
GARLON 4	1 LB	OIL		10	DORMANT	0	39
GARLON 4	1 LB	OIL		10	DORMANT	0	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	1	39
GARLON 4	1 LB	WATER	3 QT DIESEL	10	E FOLIAR	4	13
GARLON 4	1.5 LB	WATER		10	E FOLIAR	1	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	5	13
GARLON 4	3 LB	WATER	3 QT DIESEL	10	E FOLIAR	6	13
GARLON 4	2 LB	WATER	1%NT,MORACT	10.6	L FOLIAR	2	44K
GARLON 4	2 LB	WATER	3%NT,MORACT	10	L FOLIAR	4	44L
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	4	44B
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	1 LB	WATER	3 QT DIESEL	10	L SUMMER	3	13
GARLON 4	1.5 LB	WATER		10	L SUMMER	0	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	5	13
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	0	19
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	3	20
GARLON 4	3 LB	WATER	3 QT DIESEL	10	L SUMMER	3	20
GARLON 4	5 LB	WATER	3 QT DIESEL	10	L SUMMER	3	20
(GARLON 4 +	1 LB						
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	1	13
(GARLON 4 +	2 LB						
2,4-D ESTER)	2 LB	WATER	3 QT DIESEL	10	E FOLIAR	5	13
(GARLON 4 +	3 LB						
2,4-D ESTER)	2 LB	WATER	3 QT MORACT	15	L FOLIAR	6	57B
ROUNDUP	2 LB	WATER		10	E FOLIAR	3	13
ROUNDUP	0.75 QT	WATER		7.5	L FOLIAR	0	16
ROUNDUP	1 LB	WATER		10	L FOLIAR	1	16
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	2	44D
ROUNDUP	2 LB	WATER	3% NT,DYE	10.6	L FOLIAR	2	44E
ROUNDUP	2 LB	WATER	1% R-11,NT	10.7	L FOLIAR	2	44F
ROUNDUP	2 LB	WATER	<1% NT	10.6	L FOLIAR	2	44G
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	16
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	52R
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	4	44A
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	4	44C
ROUNDUP	3 LB	WATER		10	L FOLIAR	1	16
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	2	43B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62A
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62C
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62E
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62F
ROUNDUP	2 LB	WATER		10	L SUMMER	0	13
ROUNDUP	2 LB	WATER	1% R-11	10	L SUMMER	0	13
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50B
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50C
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50D
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	0	42
(ROUNDUP +	2 LB						
GARLON 4)	1 LB	WATER		10	L SUMMER	0	13
TORDON 101	1 GAL	WATER		10	E FOLIAR	5	13
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	6	32

GRAND FIR (ABIES GRANDIS)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
TORDON 101	1 GAL	WATER	NALCO-TROL	15	L FOLIAR	6	15
TORDON 101	1 GAL	WATER		10	L SUMMER	1	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	E FOLIAR	5	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL 1 LB	WATER		10	E FOLIAR	6	13
(TORDON 101 + 2,4-D ESTER)	1 GAL 2 LB	WATER		10	L SUMMER	5	13
(TORDON 101 + 2,4-D ESTER)	1.5 GAL 1 LB	WATER		10	L SUMMER	1	13
VELPAR L	2 LB	WATER	.1% NT	10	DORMANT	2	43H
VELPAR L	3 LB	WATER	DEFOAMER	10	L SUMMER	0	19
VELPAR G	2 LB	GRANULE		S	FALL	0	52B
VELPAR G	4 LB	GRANULE		S	FALL	0	52B
(VELPAR + 2,4-D,2,4-DP)	2 LB 2 LB	WATER	8% MORACT, TV	10	L SUMMER	6	43E

WESTERN HEMLOCK (TSUGA HETEROHYLLA)

2,4-D ESTER	3 LB	OIL		10	DORMANT	1	39
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	1	39
2,4-D ESTER	2 LB	WATER		10	L SUMMER	1	39
GARLON 4	1 LB	OIL		10	DORMANT	0	39
GARLON 4	1 LB	OIL		10	DORMANT	0	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	1	39
GARLON 4	1.5 LB	WATER		10	E FOLIAR	1	39
GARLON 4	4 LB	WATER	5% NT, MORACT	10	L FOLIAR	6	44B
GARLON 4	1.5 LB	WATER		10	L SUMMER	0	39
ROUNDUP	3 LB	WATER	3% NT, R-11	10	L FOLIAR	4	44A
ROUNDUP	3 LB	WATER	3% NT, R-11	10	L FOLIAR	6	44C
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	0	50A
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50C

WESTERN REDCEDAR (THUJA PLICATA)

2,4-D ESTER	3 LB	OIL		10	DORMANT	1	39
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	1	39
2,4-D ESTER	2 LB	WATER		10	L SUMMER	1	39
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	5	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	6	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	6	32
GARLON 4	1 LB	OIL		10	DORMANT	0	39
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	1	39
GARLON 4	1.5 LB	WATER		10	E FOLIAR	1	39
GARLON 4	4 LB	WATER	5% NT, MORACT	10	L FOLIAR	4	44B
GARLON 4	1.5 LB	WATER		10	L SUMMER	0	39
GARLON 4	2 LB	WATER	3 QT DIESEL	10	L SUMMER	0	13
ROUNDUP	2 LB	WATER		10	E FOLIAR	0	13
ROUNDUP	2 LB	WATER		10	L FOLIAR	2	52R

WESTERN REDCEDAR (THUJA PLICATA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	2	44A
ROUNDUP	3 LB	WATER	3% NT,R-11	10	L FOLIAR	4	44C
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62A
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62C
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62D
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62F
ROUNDUP	2 LB	WATER		10	L SUMMER	1	50B
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	6	32
TORDON 101	1 GAL	WATER	NALCO-TROL	15	L FOLIAR	6	15
(TORDON 101 + 2,4-D ESTER)	1.5 GAL 1 LB	WATER		10	L SUMMER	3	13

LODGEPOLE PINE (PINUS CONTORTA)

2,4-D ESTER	3 LB	OIL		10	DORMANT	6	39
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	4	39
2,4-D ESTER	4.2 LB	WATER		10	L FOLIAR	0	52R
2,4-D ESTER	2 LB	WATER		10	L SUMMER	1	39
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	5	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	3	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	5	32
GARLON 3A	2.25 LB	WATER		15	L FOLIAR	0	52R
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	6	39
GARLON 4	1.5 LB	WATER		10	E FOLIAR	5	39
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	6	44B
GARLON 4	1.5 LB	WATER		10	L SUMMER	5	39
KRENITE	2 LB	WATER		15	L FOLIAR	1	52R
ROUNDUP	4 LB	WATER		S	E FOLIAR	0P	59C
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	2	58B
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	0	44H
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	0	44I
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	52R
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50C
ROUNDUP	2 LB	WATER		10	L SUMMER	0	50D
ROUNDUP	2 LB	WATER		S10	FALL	0	52Z
(ROUNDUP + 2,4-D,2,4-DP)	2 LB	WATER	5% R-11	10	L SUMMER	6	43A
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	5	32
VELPAR L	2 LB	WATER	.1% NT	10	DORMANT	2	43H
VELPAR L	1 LB	WATER		S10	E FOLIAR	1	52Z
VELPAR L	2 LB	WATER		S10	E FOLIAR	5	52Z
VELPAR G	2 LB	GRANULE		S	E FOLIAR	3	52Z
VELPAR L	3 LB	WATER		S10	E FOLIAR	5	52Z
VELPAR L	1 LB	WATER		S10	L FOLIAR	0	52Z
VELPAR L	2 LB	WATER		S10	L FOLIAR	1	52Z
VELPAR G	2 LB	GRANULE		S	L FOLIAR	2	52Z
VELPAR L	3 LB	WATER		S10	L FOLIAR	4	52Z
VELPAR L	4 LB	WATER		S100	L FOLIAR	0	41
VELPAR L	2 LB	WATER	2.2 %MORACT	10	L SUMMER	2	58A
VELPAR G	2 LB	GRANULE		S	FALL	0	52B
VELPAR L	2 LB	WATER		S10	FALL	1	52Z

LODGEPOLE PINE (PINUS CONTORTA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
VELPAR G	2 LB	GRANULE		S	FALL	0	52Z
VELPAR G	4 LB	GRANULE		S	FALL	0	52B
(VELPAR + 2,4-D, 2,4-DP)	1 LB 2 LB	WATER	8% MORACT, TV	10	L SUMMER	6	43G

ENGELMANN SPRUCE (PICEA ENGELMANII)

(2,4-D + 2,4-DP)	2 LB 2 LB	WATER	8% MORACT, TV	10	L SUMMER	2	43F
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	6	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	6	32
DICAMBA	8 LB	WATER		GDP	L FOLIAR	6	32
ROUNDUP	2 LB	WATER	<1% NT	15	L SUMMER	0	50A
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	0	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	0	43D
ROUNDUP	2 LB	WATER		S10	FALL	1	52Z
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	6	32
VELPAR L	1 LB	WATER		S10	E FOLIAR	2	52Z
VELPAR L	2 LB	WATER		S10	E FOLIAR	5	52Z
VELPAR G	2 LB	GRANULE		S	E FOLIAR	5	52Z
VELPAR L	3 LB	WATER		S10	E FOLIAR	5	52Z
VELPAR L	1 LB	WATER		S10	L FOLIAR	2	52Z
VELPAR L	2 LB	WATER		S10	L FOLIAR	2	52Z
VELPAR G	2 LB	GRANULE		S	L FOLIAR	3	52Z
VELPAR L	3 LB	WATER		S10	L FOLIAR	2	52Z
VELPAR L	2 LB	WATER		S10	FALL	1	52Z
VELPAR G	2 LB	GRANULE		S	FALL	2	52Z
(VELPAR + 2,4-D, 2,4-DP)	2 LB 2 LB	WATER	8% MORACT, TV	10	L SUMMER	2	43E

SUBALPINE FIR (ABIES LASIOCARPA)

(2,4-D + 2,4-DP)	2 LB 2 LB	WATER	8% MORACT, TV	10	L SUMMER	6	43F
ROUNDUP	2 LB	WATER		10	L FOLIAR	0	52R
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	2	43C
ROUNDUP	2 LB	WATER	.6% R-11	10	L SUMMER	2	43D

PONDEROSA PINE (PINUS PONDEROSA)

2,4-D ESTER	3 LB	OIL		10	DORMANT	6	39
2,4-D ESTER	2 LB	WATER		10	E FOLIAR	4	39
2,4-D ESTER	2 LB	WATER		10	L SUMMER	1	39
2,4-D ESTER	4 LB	WATER		G100	FALL	0	46A
(2,4-D + DALAPON)	4.2 LB 8 LBS	WATER	1PT SURFACT	S100	E FOLIAR	OP	61
ASULOX	2 LB	WATER		GDP	E FOLIAR	3	36
ASULOX	2 LB	WATER		GDP	L FOLIAR	1	36
ASULOX	2 LB	WATER		GDP	L SUMMER	1	36
BANVEL 720	1 GAL	WATER		GDP	L FOLIAR	6	32
BANVEL 720	4 GAL	WATER		GDP	L FOLIAR	6	32
DICAMBA	2 LB	WATER		GDP	L FOLIAR	6	32

PONDEROSA PINE (PINUS PONDEROSA)

HERBICIDE	RATE/ ACRE	CARRIER	ADJUVANT/ ACRE	GAL/ ACRE	SPRAY SEASON	TREE INJURY	REF
DICAMBA	8 LB	WATER		GDP	L FOLIAR	6	32
GARLON 3A	8 LB	WATER		G100	FALL	2	46A
(GARLON 3A + TORDON 101)	2 LB						
TORDON 101)	4 LB	WATER		G100	FALL	2	46A
GARLON 4	2 LB	WATER	4 QT DIESEL	10	DORMANT	6	39
GARLON 4	1.5 LB	WATER		10	E FOLIAR	5	39
GARLON 4	4 LB	WATER	5%NT,MORACT	10	L FOLIAR	6	44B
GARLON 4	1.5 LB	WATER		10	L SUMMER	5	39
GARLON 4	4 LB	WATER		G100	FALL	2	46A
ROUNDUP	1 LB	WATER		S8	E FOLIAR	0P	53A
ROUNDUP	1 LB	WATER		S7	E FOLIAR	0P	53B
ROUNDUP	1 LB	WATER		S10	E FOLIAR	0P	53C
ROUNDUP	2 LB	WATER	.5% SURFACT	S25	E FOLIAR	0P	54A
ROUNDUP	2 LB	WATER		GDP	E FOLIAR	0P	53D
ROUNDUP	2 LB	WATER	.5% DYE	S3	E FOLIAR	0P	54B
ROUNDUP	2 LB	WATER		S10	E FOLIAR	4	52Z
ROUNDUP	3 LB	WATER		S10	E FOLIAR	6	52Z
ROUNDUP	4 LB	WATER		S	E FOLIAR	0P	59A
ROUNDUP	4 LB	WATER		S	E FOLIAR	0P	59D
ROUNDUP	4 LB	WATER		S	E FOLIAR	0P	59E
ROUNDUP	4 LB	WATER		S	E FOLIAR	0P	59F
ROUNDUP	1 LB	WATER	.9% R-11	12	L FOLIAR	2	58B
ROUNDUP	2 LB	WATER	3% NT,DYE	10.6	L FOLIAR	0	44E
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	0	44H
ROUNDUP	2 LB	WATER	<1% NT	10.5	L FOLIAR	0	44I
ROUNDUP	2.5 LB	WATER		S	L FOLIAR	0P	40B
ROUNDUP	2 LB	WATER		S10	L FOLIAR	1	52Z
ROUNDUP	3 LB	WATER		S10	L FOLIAR	3	52Z
ROUNDUP	4 LB	WATER		S	L FOLIAR	0P	59B
ROUNDUP	4 LB	WATER		G20	L FOLIAR	6	46B
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62A
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62C
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62E
ROUNDUP	2 LB	WATER		10.5	L SUMMER	0	62F
ROUNDUP	2 LB	WATER		S10	L SUMMER	0	52Z
ROUNDUP	3 LB	WATER	.8 OZ NT	10	L SUMMER	0	42
ROUNDUP	3 LB	WATER		S10	L SUMMER	1	52Z
ROUNDUP	2 LB	WATER		S10	FALL	1	52Z
TORDON 101	1 GAL	WATER		GDP	L FOLIAR	5	32
VELPAR L	1 LB	WATER		S10	E FOLIAR	1	52Z
VELPAR L	2 LB	WATER		S10	E FOLIAR	2	52Z
VELPAR G	2 LB	GRANULE		S	E FOLIAR	2	52Z
VELPAR L	3 LB	WATER		S10	E FOLIAR	1	52Z
VELPAR L	1 LB	WATER		S10	L FOLIAR	1	52Z
VELPAR L	2 LB	WATER		S10	L FOLIAR	1	52Z
VELPAR G	2 LB	GRANULE		S	L FOLIAR	1	52Z
VELPAR L	3 LB	WATER		S10	L FOLIAR	1	52Z
VELPAR L	2 LB	WATER	2.2 %MORACT	10	L SUMMER	2	58A
VELPAR G	2 LB	GRANULE		S	FALL	0	52B
VELPAR L	2 LB	WATER		S10	FALL	1	52Z
VELPAR G	2 LB	GRANULE		S	FALL	1	52Z
VELPAR G	4 LB	GRANULE		S	FALL	0	52B

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42. Bureau of Indian Affairs, Plummer, ID 83851 (Charles Finan).
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44. Colville NF, Newport RD, Box 770, Newport, WA 99156 (Randy Carstens).
45. Colville NF, Republic RD, Republic, WA 99166 (Barb Marshall).
46. Dixie NF, Powell RD, Box 580, Cedar City, UT 84720 (C. Baldwin).
47. Flathead NF, Tally Lake RD, Whitefish, MT 59937 (Paul Beckley).
48. Gallatin NF, Bozeman RD, 601 Nikes, Box C, Bozeman, MT 59715 (Paul Gilgen).
49. Helena NF, Townsend RD, Townsend, MT 59644 (Liz Ohlrogge).
50. Idaho Department of Lands, 1806 Main Street, St. Maries, ID 83861 (Jim Nichols); Box 909, Sandpoint, ID 83864 (Dennis Clark).
51. Idaho Panhandle NF, Avery RD, Star Route Box 1, Avery, ID 83802 (Dave Thom).
52. Intermountain Research Station, 1221 South Main, Moscow, ID 83843 (Ray Boyd).
53. Malheur NF, Bear Valley RD, John Day, OR 97845 (Bob Hilliard).
54. Ochoco NF, Prineville RD, Box 255, Prineville, OR 97754 (Scott Beyer and P. Wacker).
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61. Wallowa-Whitman NF, Wallowa Valley RD, Rt 1, Box 83, Joseph, OR 97846 (Gary Court).
62. Wenatchee NF, Lake Wenatchee RD, Wenatchee, WA 98801 (Patrick Murphy).

UNPUBLISHED REFERENCES

APPENDIX: HERBICIDE INQUIRY REPORTING FORM

Explanation of Form Items (not self-explanatory) and Plant List

Chemical - trade name of product

Rate - amount of active ingredient applied/acre, or per tree

Date applied - (month, day, year)

Method of application - aerial, backpack, squirt

Mode of application - spot, broadcast, cut surface

Gallons of total applied mix/acre

Adjuvants and percent of total mix - (consider surfactants and drift control substances)

Type of treatment - site preparation, conifer release, thinning, cull tree kill, cut surface of shrubs, other

Target species information -

(Some species are listed for you [see attached listing for codes and names]; add others as needed to complete the information.)

1. Check type of rating used.
2. For ratings of herbicide "kill" effects on target species please translate your observations and/or ratings to a 0-5 scale, with 0 = no effect; 5 = plants dead; and 1-4 = 20 percent increments of kill.
3. Sprouts: 0 = none
 - 1 = weak
 - 2 = moderate
 - 3 = vigorous.

Conifer damage information -

List species and rate chemical damage on a 0-6 scale where:

- 0 = No effect.
- 1 = 0 to 10 percent defoliation, no bud injury.
- 2 = 0 to 10 percent defoliation, slight tip curl, no bud injury.
- 3 = 11 to 40 percent defoliation, slight bud kill.
- 4 = 40+ percent defoliation, moderate bud kill.
- 5 = Slight to moderate top kill, 50+ percent defoliation.
- 6 = Trees killed.

Conifer response information -

If available, survival and growth comparisons. Include scalping or mechanical, if available.

Species Codes

Scientific name	Four-letter code	Common name
<i>Acer glabrum</i>	ACGL	Rocky Mountain maple
<i>Alnus sinuata</i>	ALSI	Sitka alder
<i>Artemisia tridentata</i>	ARTI	Sagebrush
<i>Amelanchier alnifolia</i>	AMAL	Serviceberry
<i>Arctostaphylos uva-ursi</i>	ARUV	Kinnikinnick
<i>Berberis aquifolium</i>	BEAQ	Tall Oregon-grape
<i>Berberis repens</i>	BERE	Oregon-grape
<i>Bromus</i> spp.	BROM	Brome
<i>Calamagrostis canadensis</i>	CACA	Bluejoint reedgrass
<i>Calamagrostis rubescens</i>	CARU	Pinegrass
<i>Carex</i> spp.	CARX	Sedge
<i>Ceanothus sanguineus</i>	CESA	Redstem ceanothus
<i>Ceanothus velutinus</i>	CEVE	Slickleaf ceanothus
<i>Cirsium</i> spp.	CIRS	Thistle
<i>Clematis columbiana</i>	CLCO	Clematis
<i>Cornus nuttallii</i>	CONU	Dogwood
<i>Cornus stolonifera</i>	COST	Red-osier dogwood
<i>Crataegus douglasii</i>	CRDO	Douglas hawthorn
<i>Holodiscus discolor</i>	HODI	Oceanspray
<i>Juniperus</i> spp.	JUNI	Juniper
<i>Ledum gladulosum</i>	LEGL	Labrador-tea
<i>Linnaea borealis</i>	LIBO	Twinflower
<i>Lonicera caerulea</i>	LOCA	Sweetberry honeysuckle
<i>Lonicera ciliosa</i>	LOCI	Trumpet honeysuckle
<i>Lonicera involucrata</i>	LOIN	Bearberry honeysuckle
<i>Lonicera utahensis</i>	LOUT	Utah honeysuckle
<i>Menziesia ferruginea</i>	MEFE	Menziesia
<i>Oplopanax horridum</i>	OPHO	Devil's club
<i>Pachistima myrsinites</i>	PAMY	Pachistima
<i>Philadelphus lewisii</i>	PHLE	Mock orange
<i>Physocarpus malvaceus</i>	PHMA	Ninebark
<i>Populus tremuloides</i>	POTR	Quaking aspen
<i>Prunus</i> spp.	PRUN	Cherry
<i>Prunus emarginata</i>	PREM	Bittercherry
<i>Prunus virginiana</i>	PRVI	Common chokecherry
<i>Pteridium aquilinum</i>	PTAQ	Bracken
<i>Purshia tridentata</i>	PUTR	Bitterbrush
<i>Rhamnus purshiana</i>	RHPU	Buckthorn
<i>Rhododendron albiflorum</i>	RHAL	Cascades azalea
<i>Rhus trilobata</i>	RHTR	Skunkbush sumac
<i>Ribes</i> spp.	RIBE	Current
<i>Rosa</i> spp.	ROSA	Rose
<i>Rubus</i> spp.	RUBU	All rubus
<i>Rubus leucodermis</i>	RULE	Red raspberry
<i>Rubus parviflorus</i>	RUPA	Thimbleberry
<i>Rubus ursinus</i>	RUUR	Trailing blackberry
<i>Salix</i> spp. (shrub size)	SALX	Willow
<i>Sambucus</i> spp.	SAMB	Elderberry
<i>Sambucus racemosa</i>	SARA	European elderberry
<i>Shepherdia canadensis</i>	SHCA	Russet buffaloberry
<i>Sorbus</i> spp.	SORB	Ash
<i>Spiraea betulifolia</i>	SPBE	Shinyleaf spiraea
<i>Spiraea pyramidata</i>	SPPY	Pyramid spiraea
<i>Symphoricarpos</i> spp.	SYMP	Snowberry
<i>Symphoricarpos albus</i>	SYAL	Common snowberry

(con.)

Species Codes (con.)

Scientific name	Four-letter code	Common name
<i>Symphoricarpos mollis</i>	SYMO	Trailing snowberry
<i>Symphoricarpos oreophilus</i>	SYOR	Snowberry
<i>Vaccinium</i> spp.	VACC	Huckleberry
<i>Vaccinium caespitosum</i>	VACA	Dwarf huckleberry
<i>Vaccinium globulare</i>	VAGL	Globe huckleberry
<i>Vaccinium membranaceum</i>	VAME	Big huckleberry
<i>Vaccinium scoparium</i>	VASC	Grouse huckleberry
	GRAS	Graminoids
Miscellaneous	FORB	Other herbaceous
plants	MOSS	Mosses
	FERN	Ferns
CONIFERS		
<i>Pinus monticola</i>	PIMO	Western white pine
<i>Pinus contorta</i>	PICO	Lodgepole pine
<i>Pinus ponderosa</i>	PIPO	Ponderosa pine
<i>Pseudotsuga menziesii</i>	PSME	Douglas-fir
<i>Larix occidentalis</i>	LAOC	Western larch
<i>Abies grandis</i>	ABGR	Grand fir
<i>Abies lasiocarpa</i>	ABLA	Subalpine fir
<i>Picea engelmannii</i>	PIEN	Engelmann spruce
<i>Thuja plicata</i>	THPL	Western redcedar
<i>Tsuga heterophylla</i>	TSHE	Western hemlock

Herbicide Reporting Form

Organization _____

Reporter _____

Address _____ Phone _____

Legal Description _____

Habitat type _____ Slope (%) _____ Aspect _____ Elevation _____

Soil (texture and organic matter, if available) _____

Herbicide Information

ADP Coding
(do not write here)

Chemical _____

Rate (ai/acre) _____

Date applied _____

Method of application _____

Mode of application _____

Gallons of mix/acre _____

Adjuvants and % of total mix _____

Type of treatment _____

If site preparation:

did treatment precede planting? _____

time lapse? _____

did treatment follow planting? _____

time lapse? _____

were trees protected from chemical? _____

was treatment brown-burn? _____

time between chemical treat and burn _____

time between burn and planting _____

Target Species Information

Type of rating (check one):

general observation _____

numerical rating scheme _____

Lapse time between treatment and rating (months) _____

Species Ratings

Species	Rating		Species	Rating	
	kill	sprout		kill	sprout

ACGL			RUBU		
------	--	--	------	--	--

ALSI			SALX		
------	--	--	------	--	--

AMAL			SAMB		
------	--	--	------	--	--

ARUV			SORB		
------	--	--	------	--	--

BEAQ			SPBE		
------	--	--	------	--	--

CARU			SYMP		
------	--	--	------	--	--

CARX			VACC		
------	--	--	------	--	--

CESA			XETE		
------	--	--	------	--	--

CEVE			Others		
------	--	--	--------	--	--

CIRS			↓		
------	--	--	---	--	--

FORB					
------	--	--	--	--	--

GRAS					
------	--	--	--	--	--

HODI					
------	--	--	--	--	--

LOUT					
------	--	--	--	--	--

MEFE					
------	--	--	--	--	--

PAMY					
------	--	--	--	--	--

PHLE					
------	--	--	--	--	--

PHMA					
------	--	--	--	--	--

POTR					
------	--	--	--	--	--

PRUN					
------	--	--	--	--	--

PTAQ					
------	--	--	--	--	--

RHPU					
------	--	--	--	--	--

RIBE					
------	--	--	--	--	--

ROSA					
------	--	--	--	--	--

RUPA					
------	--	--	--	--	--

ADP Coding
(Do not write here)

Conifer Damage Information

Species

Rating

Species

Rating

ADP Coding
(Do not write here)

Time of rating (months since treatment) _____

Conifer Response InformationSurvival - Controls _____ %

Chem. Treated _____ %

Other _____ %

Year rated: 1st _____ 2nd _____ 3rd _____ Other _____

Growth - Controls _____

Chem. Treatment _____

Other _____

Year rated: 1st _____ 2nd _____ 3rd _____ Other _____

Other information of interest (narrative):

Boyd, Raymond J.; Miller, Daniel L.; Kidd, Frank A.; Ritter, Catherine P. Herbicides for forest weed control in the Inland Northwest: a summary of effects on weeds and conifers. General Technical Report INT-195. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station; 1985. 66 p.

The effectiveness of various herbicide treatments on a variety of shrub and herbaceous competitive species and on crop conifers in the Inland Northwest is reported as an aid to silviculturists in evaluating alternative site preparation and conifer release treatments. Sources are provided for obtaining further information.

KEYWORDS: herbicides, effects, shrubs, herbs, conifers, Inland Northwest, site preparation, conifer release

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The Intermountain Research Station, headquartered in Ogden, Utah, is one of eight Forest Service Research stations charged with providing scientific knowledge to help resource managers meet human needs and protect forest and range ecosystems.

The Intermountain Station's primary area includes Montana, Idaho, Utah, Nevada, and western Wyoming. About 231 million acres, or 85 percent, of the land area in the Station territory are classified as forest and rangeland. These lands include grasslands, deserts, shrublands, alpine areas, and well-stocked forests. They supply fiber for forest industries; minerals for energy and industrial development; and water for domestic and industrial consumption. They also provide recreation opportunities for millions of visitors each year.

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